#### MAIL TO:

STATE OF UTAH
DIVISION OF PURCHASING
3150 STATE OFFICE BUILDING, CAPITOL HILL
P.O. BOX 141061
SALT LAKE CITY, UTAH 84114-1061
TELEPHONE (801) 538-3026
http://purchasing.utah.gov

# **Invitation to Bid**



Solicitation Number: PM6010

Due Date: 08/31/05 at 2:00 PM

Date Sent: August 9, 2005

Federal Tax Identification Number

Goods and services to be purchased: Provide Material, Lab

Provide Material, Labor and Install a Stucco EIFS System with replacement windows, new entry and ADA Ramp on Bldg.

# **Must Complete**

Company Name

Ordering Address		City	State	Zip Code		
Remittance Address (if different from ord	dering address)	City	State	Zip Code		
Type   Corporation Partnership	□ □ Proprietorship Government	Company Contact Person		1		
Telephone Number (include area code)	Fax Number (include area code)					
Company's Internet Web Address	Email Address					
Discount Terms (for bid purposes, bid di considered)	Days Required for Delivery After Receipt of Order (see attached for any required minimums)					
The following documents are included in this solicitation: Solicitation forms, instructions and general provisions, Terms and Conditions, and specifications. Please review all documents carefully before completing.  The undersigned certifies that the goods or services offered are produced, mined, grown, manufactured, or performed in Utah. Yes No If no, enter where produced, etc						
Contractor License Number	Contractor License Expiration Date	Contractor Class Title	Сс	ontractor Class Number		
CONTRACTOR MUST BE A LICENSED CONTRACTOR IN THE STATE OF UTAH TO BID FOR THIS PROJECT. SEE WWW.PURCHASING .UTAH.GOV CURRENT BIDS CONTRACTOR CLASSIFICATION FOR CURRENT CLASSIFICATION CODES.						
Offeror's Authorized Representative's Signature		Date				
Type or Print Name	Position or Title					

# **Invitation to Bid**

Solicitation Number: PM6009

Due Date: 08/24/05

#### **Vendor Name:**

Item #	Qty.	Unit	Description	Total Price
001	1.00	Job	Provide material, labor and equipment to install a stucco EIFS system, replace windows and construct a new entry with an ADA ramp on building 8000 at Camp Williams (17800 S. Camp Williams Rd., Bluffdale, UT.)  Contractor to remove existing metal siding, install new windows, install a wheelchair ramp, construct a new entry structure with Vestibule and install an approved stucco EIFS system on an existing building per attached specifications	

#### THIS IS A FORMAL BID, THEREFORE NO FAXED RESPONSES WILL BE ACCEPTED

#### **REQUIREMENTS:**

Pre-bid meetings are scheduled for Tuesday August 23 at 9:00 am & 11:00 am, to be held in Bldg. 119 at Camp Williams. **Attendance at one of the meetings is mandatory**.

### **BONDS:**

A 5% bid bond will be required at the time of bid submission and a 100% performance/payment bond will be required of the successful bidder. A completed bond statement must be submitted with each bid.

# **CHANGES OR MODIFICATIONS TO PROCUREMENT:**

Any modification to this procurement effort shall be made in writing by addendum issued by the state division of purchasing. Only authorized and properly issued addenda shall constitute the official position of the state and shall be binding. Anyone submitting a response to this solicitation, with basis in or on other communication or information received from sources other than through official addendum, assumes full risk including the possibility of a determination of non-responsiveness and may be rejected at the sole discretion of the state.

# **QUESTIONS:**

Questions regarding project details, contact the architect: John Vincent at (801) 484-2046, or the National Guard representative: Kent Barlow at (801) 253-5427.

For bid processing questions, please contact Paul Mash at 801-538-3138

Reference: RX 190 66000000002

Commodity Code: 91464

#### **INVITATION TO BID - INSTRUCTION AND GENERAL PROVISIONS**

- 1. BID PREPARATION: (a) All prices and notations must be in ink or typewritten. (b) Price each item separately. Unit price shall be shown and a total price shall be entered for each item bid. Errors may be crossed out and corrections printed in ink or typewritten adjacent and must be initialed in ink by person signing quotation. (c) Unit price will govern, if there is an error in the extension. (d) Delivery time is critical and must be adhered to as specified. (e) Wherever in this document an item is defined by using a trade name of a manufacturer and/or model number, it is intended that the words, "or equivalent" apply. "Or equivalent" means any other brand that is equal in use, quality, economy and performance to the brand listed as determined by the Division of Purchasing & General Services (DIVISION). If the vendor lists a trade name and/or catalog number in the bid, the DIVISION will assume the item meets the specifications unless the bid clearly states it is an alternate, and describes specifically how it differs from the item specified. All bids must include complete manufacturer's descriptive literature if quoting an equivalent product. All products are to be of new, unused condition, unless otherwise requested in this solicitation. (f) By signing the bid the vendor certifies that all of the information provided is accurate, that they are willing and able to furnish the item(s) specified, and that prices quoted are correct. (g) This bid may not be withdrawn for a period of 60 days from bid due date.
- 2. SUBMITTING THE BID: (a) The bid must be signed in ink, sealed in a properly addressed envelope, and delivered to the DIVISION OF PURCHASING (DIVISION), 3150 State Office Building, Capitol Hill, Salt Lake City, UT 84114-1061 by the "Due Date and Time." The "Bid Number" and "Due Date" must appear on the outside of the envelope. (b) Bids, modifications, or corrections received after the closing time on the "Due Date" will be considered late and handled in accordance with the Utah Procurement Rules, section R33-3-109. (c) Your bid will be considered only if it is submitted on the forms provided by the state. Facsimile transmission of bids to DIVISION will not be considered. (d) All prices quoted must be both F.O.B. Origin per paragraph 1.(c) and F.O.B. Destination. Additional charges including but not limited to delivery, drayage, express, parcel post, packing, cartage, insurance, license fees, permits, costs of bonds, or for any other purpose must be included in the bid for consideration and approval by the DIVISION. Upon award of the contract, the shipping terms will be F.O.B. Destination with all transportation and handling charges paid by the Contractor, unless otherwise specified by the DIVISION.
- 3. SOLICITATION AMENDMENTS: All changes to this solicitation will be made through written addendum only. Bidders are cautioned not to consider verbal modifications.
- 4. PROPRIETARY INFORMATION: Suppliers are required to mark any specific information contained in their bid which is not to be disclosed to the public or used for purposes other than the evaluation of the bid. Each request for nondisclosure must to be accompanied by a specific justification explaining why the information is to be protected. Pricing and service elements of any bid will not to be considered proprietary. Bids submitted may to be reviewed and evaluated by any persons at the discretion of the state.
- 5. SAMPLES: Samples of item(s) specified in this bid, when required by DIVISION, must to be furnished free of charge to DIVISION. Any item not destroyed by tests may, upon request made at the time the sample is furnished, to be returned at the bidder's expense.
- 6. WARRANTY: The contractor agrees to warrant and assume responsibility for all products (including hardware, firmware, and/or software products) that it licenses, contracts, or sells to the State of Utah under this contract for a period of one year, unless otherwise specified and mutually agreed upon elsewhere in this contract. The contractor (seller) acknowledges that all warranties granted to the buyer by the Uniform Commercial Code of the State of Utah applies to this contract. Product liability disclaimers and/or warranty disclaimers from the seller are not applicable to this contract unless otherwise specified and mutually agreed upon elsewhere in this contract. In general, the contractor warrants that: (1) the product will do what the salesperson said it would do, (2) the product will live up to all specific claims that the manufacturer makes in their advertisements, (3) the product will be suitable for the ordinary purposes for which such product is used, (4) the product will be suitable for any special purposes that the State has relied on the contractor's skill or judgement to consider when it advised the State about the product, (5) the product has been properly designed and manufactured, and (6) the product is free of significant defects or unusual problems about which the State has not been warned. Remedies available to the State include the following: The contractor will repair or replace (at no charge to the State) the product whose nonconformance is discovered and made known to the contractor in writing. If the repaired and/or replaced product proves to be inadequate, or fails of its essential purpose, the contractor will refund the full amount of any payments that have been made. Nothing in this warranty will be construed to limit any rights or remedies the State of Utah may otherwise have under this contract.
- 7. DIVISION APPROVAL: Purchase orders placed, or contracts written, with the state of Utah, as a result of this bid, will not to be legally binding without the written approval of the director of the DIVISION.
- 8. AWARD OF CONTRACT: (a) the contract will to be awarded with reasonable promptness, by written notice, to the lowest responsible bidder that meets the specifications. Consideration will to be given to the quality of the product(s) to be supplied, conformity to the specifications, the purpose for which required, delivery time required, discount terms and other criteria set forth in this invitation to bid. (b) The bids are opened publicly in the presence of one or more witnesses. the name of each bidder, and the amount of the bid is recorded. Each bid, and the record, is open to public inspection. (c) The DIVISION may accept any item or group of items, or overall low bid. the DIVISION has the right to cancel this invitation to bid at any time prior to the award of contract. (d) The DIVISION can reject any and all bids. And it can waive any informality, or technicality in any bid received, if the DIVISION believes it would serve the best interest of the State. (e) Before, or after, the award of a contract the DIVISION has the right to inspect the bidder's premises and all business records to determine the holder's ability to meet contract requirements. (f) DIVISION does not guarantee to make any purchase under awarded contract(s). Estimated quantities are for bidding purposes only, and not to be interpreted as a guarantee to purchase any amount. (g) Utah has a reciprocal preference law which will to be applied against bidders bidding products or services produced in states which discriminate against Utah products. For details see Section 63-56 20.5 -20.6, <u>Utah Code Annotated</u>.
- 9. ANTI-DISCRIMINATION ACT: The bidder agrees to abide by the provisions of the Utah Anti-discrimination Act, Title 34 Chapter 35, U.C.A. 1953, as amended, and Title VI and Title VII of the Civil Rights Act of 1964 (42 USC 2000e), which prohibit discrimination against any employee or applicant for employment, or any applicant or recipient of services, on the basis of race, religion, color, or national origin; and further agrees to abide by Executive Order No. 11246, as amended, which prohibits discrimination on the basis of sex; 45 CFR 90 which prohibits discrimination on the basis of age, and Section 504 of the Rehabilitation Act of 1973 or the Americans with Disabilities Act of 1990, which prohibits discrimination on the basis of disabilities. Also bidder agrees to abide by Utah's Executive Order, dated March 17, 1993, which prohibits sexual harassment in the workplace. Vendor must include this provision in every subcontract or purchase order relating to purchases by the State of Utah to insure that the subcontractors and vendors are bound by this provision.
- 10. DEBARMENT: The CONTRACTOR certifies that neither it nor its principals are presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participation in this transaction (contract) by any governmental department or agency. If the CONTRACTOR cannot certify this statement, attach a written explanation for review by the STATE.
- 11. ENERGY CONSERVATION AND RECYCLED PRODUCTS: The contractor is encouraged to offer Energy Star certified products or products that meet FEMP (Federal Energy Management Program) standards for energy consumption. The State of Utah also encourages contractors to offer products that are produced with recycled materials, where appropriate, unless otherwise requested in this solicitation.
- 12. GOVERNING LAWS AND REGULATIONS: All state purchases are subject to the Utah Procurement Code, Title 63 Chapter 56 U.C.A. 1953, as amended, and the Procurement Regulations as adopted by the Utah State Procurement Policy Board. These are available on the Internet at <a href="https://www.purchasing.utah.gov">www.purchasing.utah.gov</a>.

### STATE OF UTAH ! DIVISION OF PURCHASING

3150 State Office Building, Salt Lake City, Utah 84114-1061 Telephone (801) 538-3026, Fax (801) 538-3882

#### PURCHASE ORDER CONTRACT: TERMS AND CONDITIONS

ACCEPTANCE OF THIS PURCHASE ORDER BINDS THE CONTRACTOR TO ALL THESE TERMS AND CONDITIONS AND ALL THE TERMS, CONDITIONS AND PROVISIONS INCLUDED IN THE SOLICITATION THE DIVISION OF PURCHASING OFFERED RELATING TO THIS PURCHASE ORDER.

- 1. **AUTHORITY:** Provisions of this Purchase Order are pursuant to the authority set forth in the Utah Procurement Code, 63-56, Utah Code Annotated (U.C.A.) 1953, as amended, and the Utah State Procurement Rules and Regulations. Any and all supplies, services and equipment furnished will comply fully with all applicable Federal and St ate laws and regulations.
- 2. **CONTRACT JURISDICTION, CHOICE OF LAW, AND VENUE:** The provisions of this Purchase Order shall be governed by the laws of the State of Utah. The parties will submit to the jurisdiction of the courts of the State of Utah for any dispute arising out of this Purchase Order or the breach thereof. Venue shall be in Salt Lake City, in the Third Judicial District Court for Salt Lake Co.
- 3. **CONFLICT OF INTEREST:** Contractor represents that none of its officers or employees are officers or employees of the State of Utah, unless disclosure has been made in accordance with 67-16-8, U.C.A., 1953, as amended. Further, Contractor certifies that it has not offered or given any gift or compensation prohibited by 67-16-5, U.C.A., 1953, as amended, to any officer or employee of the State of Utah to secure favorable treatment with respect to being awarded this Purchase Order.
- 4. **INDEPENDENT CONTRACTOR:** Contractor shall be an independent contractor, and as such shall have no authorization, express or implied to bind the State of Utah to any agreements, settlements, liability or understanding whatsoever, and agrees not to perform any acts as agent for the State, except as expressly set forth herein.
- 5. **INDEMNITY:** Contractor agrees to indemnify, save harmless and release the State of Utah, including all state officers, agents and employees from and against any and all loss, damages, injury, liability, suits and proceedings arising out of the performance of this contract by the Contractor, its officers, agents, volunteers, employees or subcontractors.
- 6. **EQUAL OPPORTUNITY CLAUSE:** Contractor agrees to abide by the provisions of the Utah Anti-discrimination Act, Title 34 Chapter 35, U.C.A., 1953, as amended, and Title VI and Title VII of the Civil Rights Act of 1964 (42 USC 2000e), which prohibit discrimination against any employee or applicant for employment, or any applicant or recipient of services, on the basis of race, religion, color or national origin and further agrees to abide by Executive Order No. 11246, as amended, which prohibits discrimination on the basis of sex; 45 CFR 90 which prohibits discrimination on the basis of age, and Section 504 of the Rehabilitation Act of 1973 or the Americans with Disabilities Act of 1990 which prohibits discrimination on the basis of disabilities. Also, Contractor agrees to abide by Utah's Executive Order, dated March 17, 1993 which prohibits sexual harassment in the workplace. Contractor must include this provision in every subcontract or purchase order relating to purchases by the State of Utah to insure that the subcontractors and vendors are bound by this provision.
- 7. **DEBARMENT:** The Contractor certifies that neither it nor its principals are presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participation in this transaction (contract) by any governmental department or agency. If the Contractor cannot certify this statement, attach a written explanation for review by the STATE.
- 8. **CANCELLATION OR REVISION:** This Purchase Order may be changed, revised or canceled only by the Division of Purchasing giving written notice to the Contractor.
- 9. **SALES TAX EXEMPTION.** The State of Utah's sales and use tax exemption number is **E33399**. The tangible personal property or services being purchased are being paid from State funds and used in the exercise of that entity's essential functions. If the items being purchased are construction materials, they will be converted into real property by employees of this government entity, unless sales tax is included as a separate line item on this purchase order.
- 10. WARRANTY: The Contractor agrees to warrant and assume responsibility for all products (including hardware, firmware, and/or software products) that it licenses, contracts, or sells to the State of Utah under this contract for a period of one year, unless otherwise specified and mutually agreed upon elsewhere in this contract. The Contractor (seller) acknowledges that all warranties granted to the buyer by the Uniform Commercial Code of the State of Utah apply to this contract. Product liability disclaimers and/or warranty disclaimers from the seller are not applicable to this contract unless otherwise specified and mutually agreed upon elsewhere in this contract. In general, the Contractor warrants that: (1) the product will do what the salesperson said it would do, (2) the product will live up to all specific claims that the manufacturer makes in their advertisements, (3) the product will be suitable for the ordinary purposes for which such product is used, (4) the product will be suitable for any special purposes that the State has relied on the Contractor's skill or judgment to consider when it advised the State about the product, (5) the product has been properly designed and manufactured, and (6) the product is free of significant defects or unusual problems about which the State has not been warned. Remedies available to the State include the following: The Contractor will repair or replace (at no charge to the State) the product whose nonconformance is discovered and made known to the Contractor in writing. If the repaired and/or replaced product proves to be inadequate, or fails of its essential purpose, the Contractor will refund the full amount of any payments that have been made. Nothing in this warranty will be construed to limit any rights or remedies the State of Utah may otherwise have under this contract.
- 11. **PRICING AND INVOICING:** Prices to be paid for item(s) ordered are the prices listed on this Purchase Order, which include all shipping and delivery charges, unless otherwise described on this order. CONTRACTOR WILL, AFTER DELIVERY, PROMPTLY SUBMIT A CORRECT INVOICE TO THE ORDERING AGENCY. Contractor agrees that the state has a right to adjust any invoice that reflects incorrect pricing. Unless otherwise specified, payment terms shall be Net 30 days. Where prompt payment discounts apply, the period for computing a discount shall begin on the date a correct invoice, including any adjustment for damage or incomplete shipment, is received by the state. Discount will be taken on the total amount of the invoice.
- 12. **DELIVERY:** Orders must be shipped directly to ordering agency at address specified. Shipments must be made in accordance with the item(s) as described and priced on this order. Also, orders must be shipped F.O.B. Destination, Freight Prepaid, unless other shipping instructions are described in this order. UNLESS INDICATED OTHERWISE, ALL ORDERS MUST BE SHIPPED PROMPTLY (WITHIN 5 WORKING DAYS), UPON RECEIPT OF ORDER. All items listed on this Purchase Order are subject to the approval of the ordering agency. Items rejected by ordering agency for not conforming to specifications in this order shall be at Contractor's risk.
- 13. **PURCHASE ORDER NUMBER:** PURCHASE ORDER NUMBER must be clearly shown on shipping labels, packing slips, invoices and correspondence relating to this purchase.
- 14. **PATENTS, COPYRIGHTS, ETC.:** The Contractor shall release, indemnify and hold the Buyer, its officers, agents and employees harmless from any liability of any kind or nature, including the Contractor's use of any copyrighted or uncopyrighted composition, secret process, patented or unpatented invention, article or appliance furnished or used in the performance of this contract.
- 15. **PUBLIC INFORMATION**: Contractor agrees that the purchase order and any response to related bids will be public documents, as to distribution of copies, and Contractor gives the STATE express permission to make copies of the purchase order, bid response, related sales orders, and invoices in accordance with the State of Utah Government Records Access and Management Act. The permission to make copies as noted will take precedence over any statements of confidentiality, proprietary information, copyright information, or similar notation.

revision date: 12/2/2002

# **SPECIFICATION**

# UTAH NATIONAL GUARD HEADQUARTERS BUILDING #8000 CAMP WILLIAMS

# **SPECIFICATIONS**

TITLE	<u>SUBJECT</u>
	INDEX GENERAL CONDITIONS
01300 01400 01600 01700	SUBMITTALS QUALITY CONTROL MATERIAL AND EQUIPMENT CONTRACT CLOSEOUT
02211 02222 02223	ROUGH GRADING & EXCAVATION EXCAVATION BACKFILLING
03100 03200 03300 03346	CONCRETE FORMWORK CONCRETE REINFORCEMENT CAST-IN-PLACE CONCRETE CONCRETE FLOOR FINISHING
06001 06112	CARPENTRY WORK FRAMING AND SHEATHING
07240 07611 07620 07900	COATED SYNTHETIC STUCCO SYSTEM SHEET METAL STANDING SEAM ROOFING SHEET METAL FLASHING AND TRIM JOINT SEALERS
08410 08575	ALUMINUM ENTRANCES AND STOREFRONTS SINGLE HUNG VINYL WINDOWS
	LIST OF DRAWINGS
SHT. NO.	
AS-101	CAMP WILLIAMS SITE MAP
AE-101 AE-102 AE-103	FLOOR PLAN EXTERIOR ELEVATIONS ELEVATION SECTIONS AND ADA RAMP DETAILS

#### **SUBMITTALS**

#### PART 1 GENERAL

#### 1.01 SECTION INCLUDES

- A. Submittal procedures.
- B. Construction progress schedules.
- C. Proposed products list.
- D. Shop drawings.
- E. Product data.
- F. Samples.
- G. Manufacturers' instructions.
- H. Manufacturers' certificates.

#### 1.02 RELATED SECTIONS

- A. Section 01400 Quality Control: Manufacturers' field services and reports.
- B. Section 01700 Contract Closeout: Contract, warranty, and manufacturer's certificates and closeout submittals.

## 1.03 SUBMITTAL PROCEDURES

- A. Transmit each submittal to Architect/Engineer for approval.
- B. Identify Project, Contractor, Subcontractor or supplier; pertinent Drawing sheet and detail number (s) and specification section number, as appropriate.
- C. Apply Contractor's stamp, signed or initialed certifying that review, verification of products required, field dimensions, adjacent construction Work, and coordination of information, is in accordance with the requirements of the work and contract documents.
- D. Schedule submittals to expedite the project, and deliver to Architect/Engineer at business address. Coordinate submittal of related items.
- E. Identify variations from Contract Documents and product or system limitations which may be detrimental to successful performance of the completed work.
- F. Provide space for Contractor and Architect/Engineer review stamps.
- G. Revise and resubmit submittals as required; identify all changes made since previous submittal.
- H. Distribute copies of reviewed submittals to concerned parties. Instruct parties to promptly report any inability to comply with provisions.

# 1.04 CONSTRUCTION PROGRESS SCHEDULES

A. Submit initial progress schedule in duplicate within 20 days after date established in Notice to

01300 - 1 Submittals

Proceed for Architect/Engineer review.

- B. Revise and resubmit as required.
- C. Submit computer generated network analysis diagram using the critical path, PERT method, or generally as outlined in Associated General Contractors of American (AGC) publication "The Use of CPM in Construction A Manual for General Contractors and the Construction Industry".
- D. Show complete sequence of construction by activity, identifying work of separate stages and other logically grouped activities. Indicate the early and late start, early and late finish, float dates, and duration.
- E. Indicate estimated percentage of completion for each item of work at each submission.
- F. Indicate submittal dates required for shop drawings, product data, samples, and product delivery dates, including those Owner furnished and under allowances.

#### 1.05 SHOP DRAWINGS

- A. Submit the number of opaque reproductions which Contractor requires, plus four copies which will be retained by Architect/Engineer.
- B. After review, reproduce and distribute in accordance with Article on Procedures above and for Record Documents described in Section 01700 - Contract Closeout.

#### 1.06 PRODUCT DATA

- A. Submit the number of copies which the Contractor requires, plus four copies which will be retained by the Architect/Engineer.
- B. Mark each copy to identify applicable products, models, options, and other data. Supplement manufacturers' standard data to provide information unique to this project.
- C. After review distribute in accordance with Article on Procedures above and provide copies for Record Documents described in Section 01700 Contract Closeout.

# 1.07 SAMPLES

- A. Submit samples to illustrate functional and aesthetic characteristics of the product with integral parts and attachment devices. Coordinate sample submittals for interfacing work.
- B. Submit samples of finishes from the full range of manufacturers' standard colors, textures, and patterns for Architect/Engineer's selection.
- C. Include identification on each sample with full project information.
- D. Submit the number of samples specified in individual specification sections; one of which will be retained by Architect/Engineer.
- E. Reviewed samples which may be used in the work are indicated in individual specification sections.

#### 1.08 MANUFACTURER'S INSTRUCTIONS

- A. When specified in individual specification sections, submit manufacturers' printed instructions for delivery, storage, assembly, installation, start-up, adjusting, and finishing in quantities specified for Product Data.
- B. Identify conflicts between manufacturers' instructions and Contract Documents.

01300 - 2 Submittals

# 1.09 MANUFACTURER'S CERTIFICATES

- A. When specified in individual specification sections, submit manufacturers' certificate to Architect/Engineer for review in quantities specified for Product Data.
- B. Indicate material or product conforms to or exceeds specified requirements. Submit supporting reference date, affidavits and certifications as appropriate.
- C. Certificates may be recent or previous test results on material or product, but must be acceptable to Architect/Engineer.

END OF SECTION

01300 - 3 Submittals

#### QUALITY CONTROL

#### PART 1 GENERAL

#### 1.01 SECTION INCLUDES

- A. Quality assurance and control of installation.
- B. References.
- C. Field samples.
- D. Inspection and testing laboratory services.
- E. Manufacturers' field services and reports.

#### 1.02 RELATED SECTIONS

- A. Section 01300 Submittals Submission of Manufacturers' Instructions and Certificates.
- B. Section 01600 Material and Equipment: Requirements for material and product quality.

# 1.03 QUALITY ASSURANCE/CONTROL OF INSTALLATION

- A. Monitor quality control over suppliers, manufacturers, products, services, site conditions, and workmanship to produce work of specified quality.
- B. Comply fully with manufacturers' instructions, including each step in sequence.
- C. Should manufacturers' instructions conflict with Contract Documents, request clarification from Architect/Engineer before proceeding.
- D. Comply with specified standards as a minimum quality for the work except when more stringent tolerances, codes, or specified requirements indicate higher standards or more precise workmanship.
- E. Perform work by persons qualified to produce workmanship of specified quality.
- F. Secure products in place with positive anchorage devices designed and sized to withstand stresses, vibration, physical distortion, or disfigurement.

### 1.04 REFERENCES

- A. Conform to reference standard by date of issue current on date of Contract Documents.
- B. Obtain copies of standards when required by Contract Documents.
- C. Should specified reference standards conflict with Contract Documents, request clarification for Architect/Engineer before proceeding.
- D. The contractual relationship of the parties to the Contract shall not be altered from the Contract Documents by mention or inference otherwise in any reference document.

### 1.05 FIELD SAMPLES

A. Install field samples at the site as required by individual specifications sections for review.

- B. Acceptable samples represent a quality level for the work.
- C. Where field sample is specified in individual sections to be removed, clear area after field sample has been accepted by Architect/Engineer.

## 1.06 MANUFACTURERS' FIELD SERVICES AND REPORTS

- A. Submit qualifications of observer to Architect/Engineer 30 days in advance of required observations. Observer subject to approval of Architect/Engineer.
- B. When specified in individual specification sections, require material or product suppliers or manufacturers to provide qualified staff personnel to observe site conditions, conditions of surfaces and installation, quality of workmanship, start-up of equipment, test, adjust, and balance of equipment as applicable and to initiate instructions when necessary.
- C. Individuals to report observations and site decisions or instructions given to applicators or installers that are supplemental or contrary to manufacturers' written instructions.
- D. Submit report in duplicate within 30 days of observation to Architect/Engineer for review.

#### **PART 2 PRODUCTS**

Not Used.

#### PART 3 EXECUTION

Not Used.

END OF SECTION

# MATERIAL AND EQUIPMENT

### PART 1 GENERAL

#### 1.01 SECTION INCLUDES

- A. Products.
- B. Transportation and handling.
- C. Storage and protection.
- D. Product options.
- E. Substitutions.

#### 1.02 RELATED SECTIONS

A. Section 01400 - Quality Control: Product quality monitoring.

#### 1.03 PRODUCTS

- A. Products: Means new material, machinery, components, equipment, fixtures, and systems forming the work. Does not include machinery and equipment used for preparation, fabrication, conveying and erection of the work.
- B. Provide interchangeable components of the same manufacturer for similar components.

# 1.04 TRANSPORTATION AND HANDLING

- A. Transport and handle products in accordance with manufacturer's instructions.
- B. Promptly inspect shipments to assure that products comply with requirements, quantities are correct, and products are undamaged.
- C. Provide equipment and personnel to handle products by methods to prevent soiling, disfigurement, or damage.

#### 1.05 STORAGE AND PROTECTION

- A. Store and protect products in accordance with manufacturer's instructions, with seals and labels intact and legible. Store sensitive products in weathertight, climate controlled enclosures.
- B. For exterior storage of fabricated products, place on sloped supports above ground.
- C. Provide off-site storage and protection when site does not permit on-site storage or protection.
- D. Cover products subject to deterioration with impervious sheet covering. Provide ventilation to avoid condensation.
- E. Store loose granular materials on solid flat surfaces in a well-drained area. Provide mixing with foreign matter.
- F. Provide equipment and personnel to store products by methods to prevent soiling, disfigurement, or damage.

G. Arrange storage of products to permit access for inspection. Periodically inspect to assure products are undamaged and are maintained under specified conditions.

### 1.06 PRODUCT OPTIONS

A. Products specified by naming one or more manufacturers with a provision for substitutions: Submit a request for substitution for any manufacturer not named.

### 1.07 SUBSTITUTIONS

- A. Architect/Engineer will consider requests for substitutions only within 5 days of Bid Opening.
- B. Substitutions may be considered when a product becomes unavailable through no fault of the Contractor.
- C. Document each request with complete data substantiating compliance of proposed substitution with Contract Documents.
- D. A request constitutes a representation that the Bidder:
  - 1. Has investigated proposed product and determined that it meets or exceeds the quality level of the specified product.
  - 2. Will provide the same warranty for the substitution as for the specified product.
  - 3. Will coordinate installation and make changes to other work which may be required for the work to be complete with no additional cost to Owner.
  - 4. Waives claims for additional costs or time extension which may subsequently become apparent.
  - 5. Will reimburse Owner for review or redesign services associated with reapproval by authorities.
- E. Substitutions will not be considered when they are indicated or implied on shop drawing or product data submittals, without separate written request or when acceptance will require revision to the Contract Documents.
- F. Substitution Submittal Procedure:
  - 1. Submit three copies of request for substitution for consideration. Limit each request to one proposed substitution.
  - 2. Submit shop drawings, product data, and certified test results attesting to the proposed product equivalence.
  - 3. Architect/Engineer will notify Contractor in writing of decision to accept or reject request.

## **PART 2 PRODUCTS**

Not Used.

#### PART 3 EXECUTION

Not Used.

END OF SECTION

### CONTRACT CLOSEOUT

#### PART 1 GENERAL

#### 1.01 SECTION INCLUDES

- A. Closeout procedures.
- B. Final cleaning.
- C. Adjusting.
- D. Project record documents.
- E. Operation and maintenance data.
- F. Warranties.
- G. Spare parts and maintenance materials.

#### 1.02 CLOSEOUT PROCEDURES

- A. Submit written certification that Contract Documents have been reviewed, work has been inspected, and that work is complete in accordance with Contract Documents and ready for Architect/Engineer's inspections, Owner prefinal and final.
- B. Provide submittals to Architect/Engineer and Owner that are required by governing or other authorities.
- C. Submit final Application for Payment identifying total adjusted contract sum, previous payments, and sum remaining due.
- D. Owner will occupy all portions of the building upon final acceptance of project.

#### 1.03 FINAL CLEANING

- A. Execute final cleaning prior to final inspection.
- B. Clean interior and exterior glass and surfaces exposed to view; remove temporary labels, stains and foreign substances, polish transparent and glossy surfaces, vacuum carpeted and soft surfaces.
- C. Clean equipment and fixtures to a sanitary condition.
- D. Clean and replace filters of operating equipment.
- E. Clean debris from roofs, gutters, downspouts, and drainage systems.
- F. Clean site, sweep paved areas, rake clean landscaped surfaces.
- G. Remove waste and surplus materials, rubbish, and construction facilities from the site.

# 1.04 ADJUSTING

A. Adjust operating products and equipment to ensure smooth and unhindered operation.

# 1.05 PROJECT RECORD DOCUMENTS

- A. Maintain on site, one set of the following record documents; record actual revisions to the work:
  - 1. Contract drawings.
  - 2. Specifications.
  - 3. Addenda.
  - 4. Change Orders and other modifications to the contract.
  - 5. Reviewed shop drawings, product data, and samples.
- B. Store record documents separate from documents used for construction.
- C. Record information concurrent with construction progress.
- D. Specifications: Legibly mark and record at each product section description of actual products installed, including the following:
  - 1. Manufacturer's name and product model and number.
  - 2. Product substitutions or alternates utilized.
  - 3. Changes made by Addenda and modifications.
- E. Record documents and shop drawings: Legibly mark each item to record actual construction including.
- F. Submit documents to Architect/Engineer with claim for final Application for Payment.

#### 1.06 OPERATION AND MAINTENANCE DATA

- A. Submit three sets prior to final inspection bound in 8-1/2 x 11 inch text pages, three ring binders with durable plastic covers.
- B. Prepare binder covers with printed title "OPERATION AND MAINTENANCE INSTRUCTIONS" and title of project.
- C. Internally subdivide the binder contents with permanent page dividers logically organized as described below with tab titling clearly printed under reinforced laminated plastic tabs.
- D. Contents: Prepare a Table of Contents for each volume, with each product or system description identified.
- E. Part 1: Directory, listing names, addresses, and telephone numbers of Architect/Engineer, Contractor, Subcontractors, and major equipment suppliers.
- F. Part 2: Operation and maintenance instructions, arranged by system and subdivided by specification section. Identify the following:
  - 1. Significant design criteria.
  - 2. List of equipment.
  - 3. Parts list for each component.
  - 4. Operating instructions.
  - 5. Maintenance instructions for equipment and systems.
  - 6. Maintenance instructions for special finishes, including recommended cleaning methods and materials and special precautions identifying detrimental agents.
- G. Part 3: Project documents and certificates, including the following:
  - 1. Shop drawings and product data.
  - 2. Air and water balance reports.
  - 3. Certificates.
  - 4. Photocopies of warranties.
- H. Submit one copy of completed volumes in final form at prefinal inspection. This copy will be returned with Architect/Engineer comments. Revise content of documents as required prior to final submittal.
- I. Submit final volumes revised within ten days after final inspection.

# 1.07 WARRANTIES

- A. Provide duplicate notarized copies.
- B. Execute and assemble documents from subcontractors, suppliers, and manufacturers.
- C. Submit prior to final Application for Payment.

# 1.08 SPARE PARTS AND MAINTENANCE MATERIALS

- A. Provide products, spare parts, maintenance and extra materials in quantities specified in individual specification sections.
- B. Deliver to project site and place in location as directed by Owner; obtain receipt prior to final payment.

# PART 2 PRODUCTS

Not Used.

# PART 3 EXECUTION

Not Used.

# END OF SECTION

### **ROUGH GRADING & EXCAVATION**

# PART 1 GENERAL

#### 1.01 SECTION INCLUDES

- A. Removal of vegetation (shrubs, weeds, trees, etc.), asphalt paving, and subsoil.
- B. Cutting, grading, and rough contouring the site.
- C. Contractor to provide Utah licensed survey engineering company for building and site project layout.
- D. Excavation for building foundations, slabs-on-grade, and paving.

### 1.02 RELATED SECTIONS

- A. Quality Control: Inspection of bearing surfaces see GENERAL CONDITIONS.
- B. Information available to Bidders: Soil investigation report attached to this Specification (Contractor to follow <u>all</u> guidelines and recommendations; bore hole locations and findings of subsurface materials.
- C. Section 02223 Backfilling: General building area backfilling.
- D. Section 02225 Trenching: Trenching and backfilling for utilities.

### 1.03 REFERENCES

- A. ANSI/ASTM D698 Test Methods for Moisture Density Relations of Soils and Soil-Aggregate Mixtures.
- B. ANSI/ASTM D1557-78 Test Method for Density of Soil.

# 1.04 SUBMITTALS

A. Provide soils information to soils engineer for approval prior to commencing.

### 1.05 PROJECT RECORD DOCUMENTS

- A. Submit under provisions of GENERAL CONDITIONS.
- B. Accurately record actual locations of utilities remaining, by horizontal dimensions, elevations or inverts, and slope gradients.

#### PART 2 PRODUCTS

# 2.01 MATERIALS

- A. Topsoil: Excavated material, graded, free of roots, rocks larger than 2 inches, subsoil, debris, and large weeds.
- B. Subsoil: Excavated material, graded, free of lumps larger than 6 inches, rocks larger than 3 inches, and debris.
- C. Granular Fill: Type specified in Section 02223.

#### PART 3 EXECUTION

### 3.01 EXAMINATION

- A. Verify site conditions, building location, and site improvements.
- B. Verify that survey benchmark and intended elevations for the work are as indicated.

#### 3.02 PREPARATION

- A. Identify required lines, levels, contours, and datum.
- B. Identify known underground, above ground, and aerial utilities. Stake and flag locations.
- C. Notify Utility Company for locations of all utilities.
- D. Protect above and below grade utilities which are to remain.
- E. Protect bench marks, existing structures, fences, roads, paving, and curbs which are to remain from excavation equipment and vehicular traffic.

#### 3.03 SUBSOIL EXCAVATION

- A. Excavate subsoil required to accommodate building foundations, slabs-on-grade, paving and construction operations.
- B. Excavation cut not to interfere with normal 45 degree bearing splay of foundation.
- C. Grade top perimeter of excavation to prevent surface water from draining into excavation.
- D. Hand trim excavation. Remove loose matter.
- E. Remove lumped subsoil, boulders, and rock.
- F. Notify Architect/Engineer of unexpected subsurface conditions and discontinue affected work in area until notified to resume work.
- G. Correct unauthorized excavation at no extra cost to Owner.
- H. Correct areas over excavated by error in accordance with Section 02223.
- I. Excavate subsoil from areas to be further excavated, regraded; see Site Plan for designated areas.
- J. Stockpile in area designated on site. Remove excess subsoil not being reused from site.

# 3.05 FILLING

- A. Fill areas to contours and elevations with unfrozen materials.
- B. Granular Fill: Place and compact materials in continuous layers not exceeding 8 inches compacted depth, compacted to 95 percent in areas below concrete footings, slabs, and asphalt paving.
- C. Subsoil Fill: Place and compact material in continuous layers not exceeding 8 inches compacted depth, compacted to 95 percent.
- D. Maintain optimum moisture content of fill materials to attain required compaction density.
- E. Slope grade away from building minimum 3 inches in 10 feet, unless noted otherwise.

- F. Make grade changes gradual. Blend slope into level areas.
- G. Remove surplus fill materials from site.

# 3.06 TOLERANCES

A. Top Surface of Subgrade: Plus or minus 1/10 foot.

# 3.07 FIELD QUALITY CONTROL

- A. Field inspection and testing as hired by the Owner as deemed necessary will be performed under provisions of GENERAL CONDITIONS.
- B. Provide for visual inspection of bearing surfaces.
- C. Tests and analysis of fill material will be performed in accordance with ANSI/ASTM D698 and D1557 and with GENERAL CONDITIONS.
- D. Compaction testing will be performed in accordance with Section 02223.
- E. If tests indicate work does not meet specified requirements, remove work, replace, and retest at no cost to Owner.
- F. Frequency of tests as follows:
  - 1. Take (1) compaction test per lift per each 50 lineal feet of continuous building foundation.
  - 2. Slabs and flatwork will need (1) test per each 1,000 sq. ft. each lift.
  - 3. Trenches will need one (1) test for compaction per each 50 lin. ft. each lift.
  - 4. Spot foundation: One test per lift per each spot footing or isolated foundation.

### 3.08 PROTECTION

- A. Protect excavations by methods required to prevent cave-in or loose soil from falling into excavation.
- B. Protect bottom of excavations and soil adjacent to and beneath foundation from freezing.

END OF SECTION

### **EXCAVATION**

### PART 1 GENERAL

#### 1.01 SECTION INCLUDES

- A. Excavation for building foundations.
- B. Excavation for slabs-on-grade and paving.

### 1.02 RELATED SECTIONS

- A. Quality Control: Inspection of bearing surfaces See GENERAL CONDITIONS.
- B. Section 02211 Rough Grading: Subsoil removal from site surface.
- C. Section 02223 Backfilling.
- D. Section 02225 Trenching: Excavation for utility trenches.

#### 1.03 FIELD MEASUREMENTS

A. Verify that survey benchmark and intended elevations for the work are as indicated.

### **PART 2 PRODUCTS**

Not used.

### PART 3 EXECUTION

### 3.01 PREPARATION

- A. Identify required lines, levels, contours, and datum.
- B. Identify known underground, above ground, and aerial utilities. Stake and flag locations.
- C. Notify utility company to locate, to remove, and relocate utilities.
- D. Protect above and below grade utilities which are to remain.
- E. Protect bench marks, existing structures, fences, sidewalks, paving, and curbs from excavation equipment and vehicular traffic.

### 3.02 EXCAVATION

- A. Excavate subsoil required to accommodate building foundations, slabs-on-grade, paving and construction operations.
- B. Excavation cut not to interfere with normal 45 degree bearing splay of foundation.
- C. Grade top perimeter of excavation to prevent surface water from draining into excavation.
- D. Hand trim excavation. Remove loose matter.

02222 -1 Excavation

- E. Remove lumped subsoil, boulders, and rock.
- F. Notify Architect/Engineer of unexpected subsurface conditions and discontinue affected Work in area until notified to resume work.
- G. Correct unauthorized excavation at no extra cost to Owner.
- H. Correct areas over-excavated by error in accordance with Section 02223.
- I. Stockpile excavated material in area designated on site and remove excess material not being reused, from site.

# 3.03 FIELD QUALITY CONTROL

- A. Field inspection will be performed under provisions of GENERAL CONDITIONS.
- B. Provide for visual inspection of bearing surfaces.

# 3.04 PROTECTION

- A. Protect excavations by methods required to prevent cave-in or loose soil from falling into excavation.
- B. Protect bottom of excavations and soil adjacent to and beneath foundation, from freezing.

# **END OF SECTION**

02222 -2 Excavation

### **BACKFILLING**

# PART 1 GENERAL

#### 1.01 SECTION INCLUDES

- A. Building perimeter backfilling to subgrade elevations.
- B. Site filling and backfilling.
- C. Fill under slabs-on-grade and paving.
- D. Consolidation and compaction under building footings and slabs.
- E. Fill for over excavation.

# 1.02 RELATED SECTIONS

- A. Section 02222 Excavation.
- B. Section 03300 Cast-in-Place Concrete: Concrete materials.
- C. General Conditions Consolidation and compaction testing.
- D. Soils report attached--follow all recommendations.

### 1.03 REFERENCES

- A. ANSI/ASTM C136 Method for Sieve Analysis of Fine and Coarse Aggregates.
- B. ANSI/ASTM D698 Test Methods for Moisture-Density Relations of Soils and Soil-Aggregate Mixtures, Using 5.5 lb Rammer and 12 inch Drop.
- C. ANSI/ASTM D1557 Test Methods for Moisture-Density Relations of Soils and Soil-Aggregate Mixtures Using 10 lb Rammer and 18 inch Drop.

### 1.04 SUBMITTALS

A. Submit under provisions of GENERAL CONDITIONS and test data requested material to use and sources.

# **PART 2 PRODUCTS**

# 2.01 FILL MATERIALS

- A. Type A Granular Material: Pit run, washed natural stone; free of shale, clay, friable material, sand, debris; graded in accordance with ANSI/ASTM C136.
- B. Subsoil: Reused, free of gravel larger than 3 inch size, and debris; see Soils Report.
- C. Concrete: Structural concrete conforming to Section 03300.

### PART 3 EXECUTION

# 3.01 EXAMINATION

02223 - 1 Backfilling

A. Verify fill materials to be reused are acceptable.

### 3.02 PREPARATION

- A. Generally, compact subgrade to density requirements for subsequent backfill materials.
- B. Cut out soft areas of subgrade not capable of insitu compaction. Backfill with Type A fill and compact to density equal to or greater than requirements for subsequent backfill material.
- C. Prior to placement of aggregate base course material at floor slabs and paved areas, compact subsoil to 95 percent of its maximum dry density in accordance with ANSI/ASTM D698.

### 3.03 BACKFILLING

- A. Backfill areas to contours and elevations with unfrozen materials.
- B. Systematically backfill to allow maximum time for natural settlement. Do not backfill over porous, wet, frozen or spongy subgrade surfaces.
- C. Granular Fill: Place and compact materials in continuous layers not exceeding 8 inches compacted depth.
- D. Soil Fill: Place and compact material in continuous layers not exceeding 8 inches compacted depth.
- E. Employ a placement method that does not disturb or damage foundations.
- F. Maintain optimum moisture content of backfill materials to attain required compaction density.
- G. Backfill against supported foundation walls both interior and exterior. Do not backfill against unsupported foundation walls.
- H. Backfill simultaneously on each side of unsupported foundation walls until supports are in place.
- I. Slope grade away from building minimum 3 inches in 10 ft unless noted otherwise.
- J. Make changes gradual. Blend slope into level areas.
- K. Remove surplus backfill materials from site.
- L. Leave fill material stockpile areas completely free of excess fill materials.

# 3.04 TOLERANCES

A. Top Surface of Backfilling Under Slabs and Paved Areas: Plus or minus one inch from required elevations.

# 3.05 FIELD QUALITY CONTROL

- A. Field inspection and testing as procured by Owner will be performed under provisions of GENERAL CONDITIONS.
- B. Tests and analysis of fill material will be performed in accordance with ANSI/ASTM D698, with GENERAL CONDITIONS.
- C. Compaction testing will be performed in accordance with ANSI/ASTM D698 and with GENERAL CONDITIONS.
- D. If tests indicate Work does not meet specified requirements, remove Work, replace and retest at no

02223 - 2 Backfilling

cost to Owner.

E. Proof roll compacted fill surfaces under slabs-on-grade and paving.

# 3.06 PROTECTION OF FINISHED WORK

- A. Protect finished Work under provisions of GENERAL CONDITIONS.
- B. Recompact fills subjected to vehicular traffic.

# 3.07 SCHEDULE

- A. Interior Slab-On-Grade:
  - 1. Consolidated engineered fill and compaction to 90%.
  - 2. Granular Material fill, 4 inches thick, compacted to 90 percent.
- B. Fill Under Concrete Walks:
  - 1. Granular material fill, to 4 inches below finish paving elevation, compacted to 90 percent.
- C. Fill for Over Excavation:
  - 1. Granular material fill as required to bring over excavation to below finish grade, compacted to 95 percent if under building structure. To be 90 percent elsewhere.

END OF SECTION

02223 - 3 Backfilling

### CONCRETE FORMWORK

# PART 1 GENERAL

#### 1.01 SECTION INCLUDES

- A. Formwork for cast-in place concrete, with shoring, bracing and anchorage.
- B. Openings for other work.
- C. Form accessories.
- D. Form stripping.

### 1.02 PRODUCTS INSTALLED BUT NOT FURNISHED UNDER THIS SECTION

A. Section 03300 - Cast-In-Place Concrete: Supply of concrete accessories for placement by this Section.

#### 1.03 RELATED SECTIONS

- A. Section 03200 Concrete Reinforcement.
- B. Section 03300 Cast-in-Place Concrete.

# 1.04 REFERENCES

- A. ACI 347 Recommended Practice For Concrete Formwork.
- B. PS-1 Construction and Industrial Plywood.

# 1.05 DESIGN REQUIREMENTS

A. Design, engineer and construct formwork, shoring and bracing to conform to design and code requirements; resultant concrete to conform to required shape, line and dimension.

### 1.06 QUALITY ASSURANCE

- A. Perform Work in accordance with ACI 347.
- B. Maintain one copy of each document on site.

## 1.07 QUALIFICATIONS

A. Design formwork under direct supervision of a Professional Structural Engineer experienced in design of this work and licensed at the place where the Project is located in the State of Utah.

# 1.08 REGULATORY REQUIREMENTS

A. Conform to applicable code for design, fabrication, erection and removal of formwork.

#### 1.09 COORDINATION

- A. Coordinate work under provisions of GENERAL CONDITIONS.
- B. Coordinate this Section with other Sections of work which require attachment of components to

formwork.

C. If formwork is placed after reinforcement resulting in insufficient concrete cover over reinforcement, request instructions from Architect/Engineer before proceeding.

#### **PART 2 PRODUCTS**

#### 2.01 WOOD FORM MATERIALS

- A. Form Materials: At the discretion of the Contractor.
- B. Lumber: Pine species; construction grade; with grade stamp clearly visible.

### 2.02 FORMWORK ACCESSORIES

- A. Form Ties: Snap-off type, galvanized] metal, fixed length, free of defects that could leave holes larger than one inch in concrete surface.
- B. Form Release Agent: Colorless mineral oil which will not stain concrete, absorb moisture, impair natural bonding, or color characteristics of coating intended for use on concrete.
- C. Corners: Filleted wood strip type; 3/4 x 3/4 inch size; maximum possible lengths.
- D. Nails, Spikes, Lag Bolts, Through Bolts, Anchorages: Sized as required, of sufficient strength and character to maintain formwork in place while placing concrete.

#### PART 3 EXECUTION

#### 3.01 EXAMINATION

A. Verify lines, levels and centers before proceeding with formwork. Ensure that dimensions agree with Drawings.

### 3.02 EARTH FORMS

A. Earth forms are not permitted.

#### 3.03 ERECTION - FORMWORK

- A. Erect formwork, shoring and bracing to achieve design requirements, in accordance with requirements of ACI 301.
- B. Provide bracing to ensure stability of formwork. Shore or strengthen formwork subject to overstressing by construction loads.
- C. Arrange and assemble formwork to permit dismantling and stripping. Do not damage concrete during stripping. Permit removal of remaining principal shores.
- D. Align joints and make watertight. Keep form joints to a minimum.
- E. Obtain approval before framing openings in structural members which are not indicated on Drawings.
- F. Provide fillet strips on external corners.

# 3.04 APPLICATION - FORM RELEASE AGENT

- A. Apply form release agent on formwork in accordance with manufacturer's recommendations.
- B. Apply prior to placement of reinforcing steel, anchoring devices, and embedded items.

C. Do not apply form release agent where concrete surfaces will receive special finishes or applied coverings which are effected by agent. Soak inside surfaces untreated forms with clean water. Keep surfaces coated prior to placement of concrete.

### 3.05 INSERTS, EMBEDDED PARTS, AND OPENINGS

- A. Provide formed openings where required for items to be embedded in or passing through concrete work.
- B. Locate and set in place items which will be cast directly into concrete.
- C. Coordinate work of other Sections in forming and placing openings, slots, reglets, recesses, chases, sleeves, bolts, anchors, and other inserts.
- D. Position recessed anchors for block masonry anchors to spacing and intervals.
- E. Install accessories in accordance with manufacturer's instructions, straight, level, and plumb. Ensure items are not disturbed during concrete placement.

#### 3.06 FORM CLEANING

- A. Clean and remove foreign matter within forms as erection proceeds.
- B. Clean formed cavities of debris prior to placing concrete.
- C. Flush with water or use compressed air to remove remaining foreign matter. Ensure that water and debris drain to exterior through clean-out ports.
- D. During cold weather, remove ice and snow from within forms. Do not use de-icing salts or water to clean out forms, unless formwork and concrete construction proceed within heat enclosure. Use compressed air or other means to remove foreign matter.

# 3.07 FORMWORK TOLERANCES

A. Construct formwork to maintain tolerances required by ACI 301.

# 3.08 FIELD QUALITY CONTROL

A. Inspect erected formwork, shoring, and bracing to ensure that work is in accordance with formwork design, and that supports, fastenings, wedges, ties, and items are secure.

#### 3.09 FORM REMOVAL

- A. Do not remove forms or bracing until concrete has gained sufficient strength to carry its own weight and impose loads.
- B. Loosen forms carefully. Do not wedge pry bars, hammers, or tools against finish concrete surfaces scheduled for exposure to view.
- C. Store removed forms in manner that surfaces to be in contact with fresh concrete will not be damaged. Discard damaged forms.
- D. Rub all exposed concrete.

#### END OF SECTION

### CONCRETE REINFORCEMENT

# PART 1 GENERAL

#### 1.01 SECTION INCLUDES

A. Reinforcing steel bars, wire fabric and accessories for cast-in-place concrete.

### 1.02 RELATED SECTIONS

- A. Section 03100 Concrete Formwork.
- B. Section 03300 Cast-in-Place Concrete.
- C. Section 03346 Concrete Floor Finishing: Reinforcement for concrete floor toppings.

### 1.03 REFERENCES

- A. ACI 301 Structural Concrete for Buildings.
- B. ACI 318 Building Code Requirements For Reinforced Concrete.
- C. ACI American Concrete Institute Detail Manual.
- D. ANSI/ASTM A82 Cold Drawn Steel Wire for Concrete Reinforcement.
- E. ANSI/ASTM A184 Fabricated Deformed Steel Bar Mats for Concrete Reinforcement.
- F. ANSI/ASTM A185 Welded Steel Wire Fabric for Concrete Reinforcement.
- G. ASTM A615 Deformed and Plain Billet Steel Bars for Concrete Reinforcement.
- H. CRSI Concrete Reinforcing Steel Institute Manual of Practice.
- I. CRSI Recommended Practice For Placing Reinforcing Bars.
- J. CRSI Recommended Practice For Placing Bar Supports, Specifications and Nomenclature.

## 1.04 SUBMITTALS

- A. Submit under provisions of GENERAL CONDITIONS.
- B. Shop Drawings: Indicate bar sizes, spacings, locations, and quantities of reinforcing steel and wire fabric, bending and cutting schedules, and supporting and spacing devices.
- C. Manufacturer's Certificate: Certify that products meet or exceed specified requirements.

# 1.05 QUALITY ASSURANCE

- A. Perform Work in accordance with ANSI/ASTM A184.
- B. Maintain one copy of each document on site.
- C. Provide Architect/Engineer with access to fabrication plant to facilitate inspection of reinforcement. Provide notification of commencement and duration of shop fabrication in sufficient time to allow inspection.

### 1.06 QUALIFICATIONS

A. Design support of reinforcement under direct supervision of a Professional Structural Engineer experienced in design of this work and licensed in the State of Utah.

### 1.07 COORDINATION

- A. Coordinate work under provisions of GENERAL CONDITIONS.
- B. Coordinate with placement of formwork, formed openings and other Work.

#### PART 2 PRODUCTS

#### 2.01 REINFORCEMENT

- A. Reinforcing Steel: ASTM A615, 60 ksi yield grade; deformed billet steel bars, plain finish. Splices shall be lapped a minimum 30 bar diameters or 1'-6" minimum and 40 bar diameters for foundation dowels to masonry walls.
- B. Reinforcing Steel Mat: A615, 60 ksi yield grade; steel bars.
- C. Stirrup Steel: ANSI/ASTM A82, plain finish.
- D. Welded Steel Wire Fabric: ASTM A185 Plain Type; in coiled rolls and flat mats, see drawings; plain finish.

# 2.02 ACCESSORY MATERIALS

- A. Tie Wire: Minimum 16 gage annealed type.
- B. Chairs, Bolsters, Bar Supports, Spacers: Sized and shaped for strength and support of reinforcement during concrete placement conditions

# 2.03 FABRICATION

- A. Fabricate concrete reinforcing in accordance with ANSI/ASTM A184.
- B. Locate reinforcing splices not indicated on Drawings, at point of minimum stress. Review location of splices with Architect/Engineer.

#### PART 3 EXECUTION

## 3.01 PLACEMENT

- A. Place, support and secure reinforcement against displacement. Do not deviate from required position.
- B. Accommodate placement of formed openings.
- C. Maintain concrete cover around reinforcing as follows:

Item	Coverage
Walls (exposed to weather or backfill)	1-1/2 inch
Footings and Concrete Formed Against Earth	3 inches
Slabs on Fill	1-1/2 inch

D. Conform to applicable I.B.C. code for concrete cover over reinforcement.

# 3.02 FIELD QUALITY CONTROL

A. Field review will be performed under provisions of GENERAL CONDITIONS.

END OF SECTION

### **CAST-IN-PLACE CONCRETE**

# PART 1 GENERAL

### 1.01 SECTION INCLUDES

- A. Cast-in-place concrete foundation footings and walls.
- B. Slabs on grade, curbs, aprons, etc..
- C. Control, and expansion and contraction joint devices associated with concrete work, including joint sealants.

### 1.02 PRODUCTS FURNISHED BUT NOT INSTALLED UNDER THIS SECTION

A. Section 03100 - Concrete Formwork: Placement of formwork.

### 1.03 RELATED SECTIONS

- A. Section 03100 Concrete Formwork: Formwork and accessories.
- B. Section 03200 Concrete Reinforcement.
- C. Section 03346 Concrete Floor Finishing.

# 1.04 REFERENCES

- A. ACI 301 Structural Concrete for Buildings.
- B. ACI 302 Guide for Concrete Floor and Slab Construction.
- C. ACI 305R Hot Weather Concreting.
- D. ACI 306R Cold Weather Concreting.
- E. ACI 308 Standard Practice for Curing Concrete.
- F. ACI 3 Building Code Requirements for Reinforced Concrete.
- G. ASTM C33 Concrete Aggregates.
- H. ASTM C94 Ready-Mixed Concrete.
- I. ASTM C150 Portland Cement.
- J. ASTM C260 Air Entraining Admixtures for Concrete.

# 1.05 PROJECT RECORD DOCUMENTS

- A. Submit under provisions of GENERAL CONDITIONS.
- B. Accurately record actual locations of embedded utilities and components which are concealed from view.

#### 1.06 QUALITY ASSURANCE

A. Perform Work in accordance with ACI 301.

- B. Maintain one copy of each document on site.
- C. Acquire cement and aggregate from same source for all work.
- D. Conform to ACI 305R when concreting during hot weather.
- E. Conform to ACI 306R when concreting during cold weather.

#### 1.07 FIELD SAMPLES

- Provide under provisions of GENERAL CONDITIONS. Coordinate with Section 03100.
- B. Sample Panel: Sufficient size to indicate special treatment or finish required.
- C. Accepted sample panel is considered basis of quality for the finished work. Keep sample panel exposed to view for duration of concrete work.
- D. Accepted sample may not remain as part of the work.

#### 1.08 COORDINATION

- A. Coordinate work under provisions GENERAL CONDITIONS.
- B. Coordinate the placement of joint devices with erection of concrete formwork and placement of form accessories.

# PART 2 PRODUCTS

# 2.01 CONCRETE MATERIALS

- A. Cement: ASTM C150, Type II Normal manufactured by Portland Cement Co.
- B. Fine and Coarse Aggregates: ASTM C33.
- C. Water: Clean and not detrimental to concrete.

#### 2.02 ACCESSORIES

A. Non-Shrink Grout: Premixed compound consisting of nonmetallic aggregate, cement, water reducing and plasticizing agents; capable of developing minimum compressive strength of 2,000 psi in 48 hours.

### 2.03 JOINT DEVICES AND FILLER MATERIALS

- A. Joint Filler: ASTM D1751; Asphalt impregnated fiberboard or felt, 1/2 inch thick; tongue and groove profile; manufactured by Celotex.
- B. Construction Joint Devices: Integral galvanized steel; 6 inch thick, formed to tongue and groove profile, knockout holes spaced at 6 inches, ribbed steel spikes with tongue to fit top screed edge.

### 2.04 CONCRETE MIX

- A. Mix and deliver concrete in accordance with ASTM C94, requiring the concrete supplier to provide concrete to specified performance criteria.
- B. Select proportions for normal weight concrete in accordance with ACI 301 requiring the concrete supplier to provide concrete to specific minimum water/cement ratio.

- C. Provide concrete to the following criteria:
  - 1. Compressive Strength 28 days: Foundations: 3,000 psi; W/C = 0.50; Floor Slabs: 4,000 psi, W/C = 0.45.
  - 2. Slump: 2 to 3 inches.
  - 3. Use 6 bag mix for 3,000 psi and 6-1/2 bag mix for 4,000 psi.
  - 4. Aggregates: 3/4" per C33.
  - 5. Exterior concrete is to be air-entrained with 6-1/2% plus or minus 1-1/2% air per C260.
- D. Use accelerating admixtures in cold weather only when approved by Architect/Engineer. Use of admixtures will not relax cold weather placement requirements.
- E. Use calcium chloride only when approved by Architect/Engineer.
- F. Use set retarding admixtures during hot weather only when approved by Architect/Engineer.
- G. Add air entraining agent to normal weight concrete mix for work exposed to exterior.

### PART 3 EXECUTION

### 3.01 EXAMINATION

- A. Verify site conditions under provisions of GENERAL CONDITIONS.
- B. Verify requirements for concrete cover over reinforcement. See drawings.
- C. Verify that anchors, seats, plates, reinforcement and other items to be cast into concrete are accurately placed, positioned securely, and will not cause hardship in placing concrete.

#### 3.02 PREPARATION

- A. Prepare previously placed concrete by cleaning with steel brush and applying bonding agent in accordance with manufacturer's instructions.
- B. In locations where new concrete is doweled to existing work, drill holes in existing concrete, insert steel dowels and pack solid with nonshrink grout.

#### 3.03 PLACING CONCRETE

- A. Place concrete in accordance with ACI 304, ACI 301 and ACI 318.
- B. Notify Architect/Engineer minimum 24 hours prior to commencement of operations.
- C. Ensure reinforcement, inserts, embedded parts, formed joint fillers are not disturbed during concrete placement.
- D. Install joint fillers, primer and sealant in accordance with manufacturer's instructions.
- E. Separate slabs on grade from vertical surfaces with 1/2 inch thick joint filler.
- F. Extend joint filler from bottom of slab to within 1/4 inch of finished slab surface.
- G. Install joint devices in accordance with manufacturer's instructions.
- H. Install construction joint device in coordination with floor slab pattern placement sequence. Set top to required elevations. Secure to resist movement by wet concrete.
- I. Install joint device anchors. Maintain correct position to allow joint cover flush with floor and

wall finish.

- J. Install joint covers in one piece or longest practical length, when adjacent construction activity is complete.
- K. Maintain records of concrete placement. Record date, location, quantity, air temperature, and test samples taken.
- L. Place concrete continuously between predetermined expansion, control, and construction joints.
- M. Do not interrupt successive placement; do not permit cold joints to occur.
- N. Place floor slabs in checkerboard pattern indicated.
- O. Screed slabs on grade level, maintaining surface flatness of maximum 1/8 inch in 10 ft and provide slope to floor drains as shown on drawings.
- P. Tooled joints in walls are to be 1/2" maximum width and depth.

#### 3.04 CONCRETE FINISHING

- A. Provide formed vertical concrete surfaces to be left exposed with smooth rubbed or sand float finish.
- B. Finish concrete floor surfaces to requirements of Section 03346.
- C. Wood float surfaces which will receive ceramic tile with full bed setting system.
- D. Steel trowel surfaces which are scheduled to be exposed.
- E. In areas with floor drains, maintain floor elevation at walls; pitch surfaces uniformly to drains at 1/8 inch per foot nominal as indicated on Drawings.
- F. Broom finish all exterior walks.

### 3.05 CURING AND PROTECTION

- A. Immediately after placement, protect concrete from premature drying, excessively hot or cold temperatures, and mechanical injury.
- B. Maintain concrete with minimal moisture loss at relatively constant temperature for period necessary for hydration of cement and hardening of concrete.
- C. Cure floor surfaces in accordance with ACI 308.
- D. Spraying: Spray water over floor slab areas and maintain wet for 7 days.

# 3.06 FIELD QUALITY CONTROL

- A. The Owner will employ a testing agency as recommended by the Architect.
- B. Provide free access to Work and cooperate with appointed firm.
- C. Submit proposed mix design of each class of concrete to inspection and testing firm and structural engineer for preview prior to commencement of work.
- D. Tests of cement and aggregates may be performed to ensure conformance with specified requirements.

- E. Three concrete test cylinders will be taken for every 10 cu. yds. of each class of concrete placed. Testing lab shall be selected by Architect. Owner will pay for tests except for retesting when defective concrete is detected.
- F. One additional test cylinder will be taken during cold weather concreting, cured on on job site under same conditions as concrete it represents.
- G. One slump test will be taken for each set of test cylinders taken.

### 3.07 PATCHING

- A. Allow Architect/Engineer to inspect concrete surfaces immediately upon removal of forms.
- B. Excessive honeycomb or embedded debris in concrete is not acceptable. Notify Architect/Engineer upon discovery.
- C. Patch imperfections as directed.

### 3.08 DEFECTIVE CONCRETE

- A. Defective Concrete: Pitting, spalling, or cracking concrete or concrete not conforming to required lines, details, dimensions, tolerances or specified requirements.
- B. Repair or replacement of defective concrete will be determined by the Architect/Engineer.
- C. Do not patch, fill, touch-up, repair, or replace exposed concrete except upon express direction of Architect/Engineer for each individual area.

### 3.09 SCHEDULE - CONCRETE TYPES AND FINISHES

- A. Foundation Walls: 3,000 psi 28 day concrete, form finish with honeycomb filled surface and rubbed exposed surfaces.
- B. Concrete Slabs on Grade: 4,000 psi 28 day concrete. Steel and wood trowel finishes depending on floor covering (ceramic tile) or exposed concrete.

# 3.10 TWO (2) YEAR WRITTEN GUARANTEE

A. Provide two year written guarantee to Owner in form approved by architect to promptly remove and/or repair concrete as directed by architect at contractor's expense. New replacement work to carry similar two-year written guarantee. Guarantee shall start from date of Substantial Completion.

#### END OF SECTION

### CONCRETE FLOOR FINISHING

#### PART 1 GENERAL

#### 1.01 SECTION INCLUDES

- A. Finishing slabs on grade.
- B. Surface treatment with sealer.

### 1.02 RELATED SECTIONS

- A. Section 03300 Cast-in-Place Concrete: Prepared concrete floors ready to receive finish.
- B. Section 03300 Cast-in-Place Concrete: Control and formed expansion and contraction joints and joint devices.

### 1.03 REFERENCES

A. ACI 301 - Structural Concrete for Buildings.

#### 1.04 SUBMITTALS

A. Manufacturer's Installation Instructions: Indicate criteria for preparation and application.

### 1.05 DELIVERY, STORAGE, AND HANDLING

- A. Deliver, store, protect and handle products under provisions of GENERAL CONDITIONS.
- B. Deliver materials in manufacturer's packaging including application instructions.

# **PART 2 PRODUCTS**

#### 2.01 COMPOUNDS - HARDENERS AND SEALERS

A. Chemical Sealer: Clear Spray type; TK26EUV manufactured by Tri-Kote.

#### PART 3 EXECUTION

## 3.01 EXAMINATION

- A. Verify site conditions under provisions of GENERAL CONDITIONS.
- B. Verify that floor surfaces are acceptable to receive the Work of this Section.

# 3.02 FLOOR FINISHING

- A. Finish concrete floor surfaces in accordance with ACI 301.
- B. Wood float surfaces which will receive ceramic tile with full bed setting system.
- C. Steel trowel surfaces which are scheduled to be exposed.
- D. In areas with floor drains, maintain floor elevation at walls; pitch surfaces uniformly to drains at

1/8 inch per foot nominal as indicated on Drawings.

# 3.03 FLOOR SURFACE TREATMENT

A. Apply sealer in accordance with manufacturer's instructions on scheduled floor surfaces.

# 3.04 TOLERANCES

A. Maximum Variation of Surface Flatness For Exposed Concrete Floors: 1/16 inch in 10 ft.

### **CARPENTRY WORK**

#### PART 1 GENERAL

#### 1.01 WORK INCLUDED

A. Rough carpentry and finish carpentry. Refer to Schedule located at the end of this Section.

# 1.02 RELATED WORK

- A. Setting anchorage in stud walls for work of this Section.
- B. Job layout and supervision of trades thru project.

### 1.03 QUALITY ASSURANCE

A. Rough Carpentry Lumber: Visible grade stamp, of agency certified by National Forest Products Association (NFPA).

#### PART 2 PRODUCTS

### 2.01 ROUGH CARPENTRY MATERIALS

- A. Lumber: PS 20; graded in accordance with established Grading rules; maximum moisture content of 6 percent; of following species and grades:
  - 1. Structural Light Framing: Stress group Douglas Fir, Larch; No. 2 grade.
  - 2. Studding: Stress group Douglas Fir, Larch; stud grade.
  - 3. All wood plates and sills shall be No. 2 Hemlock, Fir, treated with 0.25#/ft. of CCAC.
- B. Nails, Spikes and Staples: Galvanized for exterior locations, high humidity locations and treated wood; plain finish for other interior locations; size and type to suit application.
- C. Bolts, Nuts, Washers, Lags, Pins and Screws: Medium carbon steel; sized to suit application, galvanized for exterior locations, high humidity locations and treated wood; plain finish for other interior locations.
- D. Fasteners: Toggle bolt type for anchorage to hollow masonry. Expansion shield and lag bolt type for anchorage to solid masonry or concrete. Bolts or power activated type for anchorage to steel.
- E. Exposed Boards: Provide lumber with 19 percent maximum moisture content and any of the following species and grades:
  - 1. Species and Grade: Eastern white pine, D Select per NELMA or NLGA rules.
  - 2. Species and Grade: Western or Idaho white pine, Choice per NLGA or WWPA rules.
- F. Fasteners: Size and type indicated. Where miscellaneous carpentry is exposed to weather, in ground contact, or in area of high relative humidity, provide fasteners with a hot-dip zinc coating per ASTM A153 or of Type 304 stainless steel.
  - 1. Power-Driven Fasteners: CABO NER-272.

### PART 3 EXECUTION

#### 3.01 SCHEDULE

A. Rough Carpentry Work:

- Building layout and supervision. Structural and non-structural concrete form work. 1. 2.
- 3.
- Framing of structural plate wood trusses.
  Framing and furring for wall finishes and stud walls.
  Miscellaneous furring and blocking. 4.
- 5.

### FRAMING AND SHEATHING

### PART 1 GENERAL

#### 1.01 WORK INCLUDED

- A. Structural roof framing and sheathing.
- B. Preservative treatment of wood in contact with concrete.

#### 1.02 RELATED WORK

A. Section 03300 - Cast-In-Place Concrete: Setting anchors in concrete.

### 1.03 REFERENCES

- A. ALSC American Lumber Standards Committee: Softwood Lumber Standards.
- B. APA American Plywood Association.
- C. AWPA American Wood Preservers' Association: Book of Standards.
- D. NFPA National Forest Products Association.
- E. WCLIB West Coast Lumber Inspection Bureau: Standard Grading Rules for West Coast Lumber.
- F. WWPA Western Wood Products Association.

#### 1.04 QUALITY ASSURANCE

- A. Lumber Grading Agency: Certified by ALSC.
- B. Plywood Grading Agency: Certified by APA.

# 1.05 DELIVERY, STORAGE, AND HANDLING

A. Store and protect products under provisions of GENERAL CONDITIONS.

### PART 2 PRODUCTS

#### 2.01 LUMBER MATERIALS

- A. Lumber Grading Rules: NFPA, WWPA.
- B. Psremanufactured/Engineered Trusses: Douglas Fir species, #2 and better grade, 2" and better size classification, 19 percent maximum moisture content.
- C. Non-structural Light Framing: Douglas Fir species, #2 grade, 2" and better size classification, 19 percent maximum moisture content.
- D. Studding: Douglas Fir species, #2 and better grade, 2" and better size classification, 19 percent maximum moisture content.

### 2.02 SHEATHING MATERIALS

A. Roof Sheathing: APA Structural I, Grade C-D; sanded; or O.S.B.

### 2.03 ACCESSORIES

- A. Fasteners: Hot-dipped galvanized steel for exterior, high humidity, and treated wood locations; plain finish elsewhere; size and type to suit condition.
- B. Drywall Screws: Bugle head, steel, power driven type length of three times thickness of sheathing.

#### 2.04 WOOD TREATMENT

A. Wood Preservative (Surface Application): Clear, type; manufactured by 'Penta'.

### PART 3 EXECUTION

### 3.01 SITE APPLIED WOOD TREATMENT

- A. Brush apply one coat of preservative treatment on wood in contact with cementitious materials.
- B. Apply preservative treatment in accordance with manufacturer's instructions.
- C. Treat site-sawn ends.
- D. Allow preservative to cure prior to erecting members.

### 3.02 FRAMING

- A. Erect wood framing members level and plumb.
- B. Construct framing members full length without splices.
- C. Bridge framing in excess of 6 feet span as detailed. Fit solid blocking at ends of members.

### 3.03 SHEATHING

- A. Secure roof sheathing perpendicular to framing members with ends staggered. Secure sheet edges over firm bearing. Provide solid edge blocking between sheets.
- B. Install sheathing to combination single and two span continuous, random with 2 foot minimum length.

### 3.04 TOLERANCES

A. Framing Members: 1/4 inch maximum from true position.

### COATED SYNTHETIC STUCCO SYSTEM

#### PART 1 GENERAL

#### 1.01 SECTION INCLUDES

A. Composite wall cladding of rigid insulation and applied coating; see building elevations.

### 1.02 RELATED SECTIONS

- A. Section 07620 Sheet Metal Flashing and Trim: Perimeter flashings.
- B. Section 07900 Joint Sealers: Perimeter sealant seal.

### 1.03 PERFORMANCE REQUIREMENTS

A. Materials of this Section shall provide continuity of thermal barrier at building enclosure elements in conjunction with thermal materials.

# 1.04 SUBMITTALS

- A. Submit under provisions of GENERAL CONDITIONS.
- B. Shop Drawings: Indicate wall joint pattern, joint details, and product application.
- C. Product Data: Provide data on system materials, product characteristics, performance criteria, limitations, and color samples. Note: Match existing Base building colors and finish.
- D. Samples: Submit two, 10" x 10" size samples illustrating coating color and texture range for selection.
- E. Manufacturer's Installation Instructions: Indicate preparation required, installation techniques and jointing requirements.

# 1.05 QUALIFICATIONS

A. Applicator: Company specializing in performing the work of this Section with minimum three years approved by manufacturer.

# 1.06 REGULATORY REQUIREMENTS

A. Conform to UL rating for system fire resistance ratings for finish system.

# 1.07 FIELD SAMPLES

- A. Provide under provisions of GENERAL CONDITIONS.
- B. Construct one field sample panel, three ft long by three ft wide, of system materials illustrating method of attachment, surface finish, color, and texture.
- C. Locate where directed.
- D. Accepted sample may not remain as part of the Work.

### 1.08 DELIVERY, STORAGE, AND HANDLING

- A. Deliver, store, protect and handle products under provisions of GENERAL CONDITIONS.
- B. Protect finish materials from freezing by storing in an environment recommended by manufacturer.

### 1.09 ENVIRONMENTAL REQUIREMENTS

- A. Do not install finish when ambient temperature is below 40 degrees F.
- B. Maintain this temperature during and 24 hours after installation of finish.

### PART 2 PRODUCTS

### 2.01 MANUFACTURERS

- A. Senergy.
- B. Dryvit
- C. Substitutions: Under provisions of GENERAL CONDITIONS.

#### 2.02 MATERIALS

- A. Reinforced Mesh Application: To be mechanically attached as recommended by manufacturer; to be stainless steel wire mesh.
- B. Primer/First Coat: Recommended by manufacturer (brown coat)
- C. Coating: Synthetic composition, air curing, containing fibers and color to match existing Base colors.

### 2.03 ACCESSORIES (Applies to wood walls)

- A. Perimeter Trim and Control Joints: Extruded plastic or metal with attachment flanges; see elevations. Note horizontal joint at gable ends.
- B. Sealant Materials: Recommended by coating manufacturer. Type, specified in Section 07900.

#### PART 3 EXECUTION

### 3.01 EXAMINATION

- A. Verify site conditions under provisions of GENERAL CONDITIONS.
- B. Verify that substrate and adjacent materials are dry.
- C. Verify substrate surface is flat, free of irregularities.

### 3.02 INSTALLATION - COATING

- A. Install stainless steel mesh reinforcement in accordance with manufacturer's instructions and mechanically attach to block walls..
- B. Apply primer first coat to a minimum thickness of 1/2 inch and fully embed reinforcement, wrinkle free.
- C. Lap reinforcement edges and ends 2-1/2 inches.
- D. Install perimeter trim and control joints.

- E. Apply finish to a minimum thickness of 1/4 inch.
- F. Apply sealant at finish perimeter and control joints in accordance with Section 07900.

# 3.03 PROTECTION OF FINISHED WORK

- A. Protect finished Work under provisions of GENERAL CONDITIONS.
- B. Do not permit finish surface to become soiled or damaged.

### SHEET METAL STANDING SEAM ROOFING

(To match existing Base metal roofing for color and product)

### PART 1 GENERAL

#### 1.01 SECTION INCLUDES

- A. Precoated galvanized steel roofing and associated flashings.
- B. Counterflashings.
- C. Ridge and eave caps and flashings.

### 1.02 PRODUCTS FURNISHED BUT NOT INSTALLED UNDER THIS SECTION

- A. Furnish counterflashings.
- B. Furnish flashing reglets and accessories.

#### 1.03 RELATED SECTIONS

- A. Section 07620 Sheet Metal Flashing and Trim.
- B. Section 07900 Joint Sealers.

### 1.04 REFERENCES

- A. ASTM A361 Steel Sheet, Zinc-Coated (Galvanized) by the Hot- Dip Process for Roofing and Siding.
- B. ASTM A446 Steel Sheet, Zinc Coated, (Galvanized) by the Hot-Dip Process, Structural (Physical) Quality.
- C. ASTM D226 Asphalt-Saturated Organic Felt Used in Roofing and Waterproofing.
- D. NAAMM Metal Finish Handbook.
- E. NRCA (National Roofing Contractors Association) Roofing Manual.
- F. SMACNA Architectural Sheet Metal Manual.

### 1.06 SUBMITTALS

- A. Submit samples under provisions of GENERAL CONDITIONS.
- B. Submit two samples 12 x 18 inch in size of metal roofing mounted on plywood backing and illustrating typical flat standing seam, external corner, ridge, junction to vertical dissimilar surface, material, and finish.
- C. Submit specified Association installation instructions.

### 1.07 QUALITY ASSURANCE

A. Installer: Company specializing in sheet metal roof installations with 3 years experience.

### 1.08 DELIVERY, STORAGE, AND HANDLING

A. Deliver products to site under provisions of GENERAL CONDITIONS.

- B. Store and protect products under provisions of GENERAL CONDITIONS.
- C. Stack preformed and prefinished material to prevent twisting, bending, or abrasion, and to provide ventilation. Slope metal sheets to ensure drainage.
- D. Prevent contact with materials during storage which may cause discoloration or staining.

### 1.09 SEQUENCING AND SCHEDULING

A. Coordinate with the work for installing flashing reglets.

#### 1.10 WARRANTY

- A. Provide two year warranty.
- B. Warranty: Include coverage for degradation of metal finish and water tightness.

#### **PART 2 PRODUCTS**

### 2.01 MANUFACTURERS

- A. Metal Sales.
- B. Berdidge.
- C. Steelco
- D. Substitutions: Under provisions of GENERAL CONDITIONS.

#### 2.02 SHEET MATERIALS

A. Precoated Galvanized Steel Stand Seam: ASTM A446, Grade A, G90 zinc coating; 24 gage core steel, shop pre-coated with modified silicone coating of selected color.

### 2.03 ACCESSORIES

- A. Fasteners: Concealed galvanized steel with neoprene washers. Finish exposed fasteners same as flashing metal.
- B. Underlayment: ASTM D226, D2178, No. 30 asphalt saturated roofing felt.
- C. Slip Sheet: Rosin sized building paper.
- D. Primer: Galvanized iron type.
- E. Protective Backing Paint: Bituminuous.
- F. Sealant: Acrylic type specified in Section 07900.
- G. Bedding Compound: Rubber-asphalt type.
- H. Plastic Cement: FS SS-C-153, Type I Asphaltic base cement.
- I. Reglets: Recessed type, galvanized steel; face and ends covered with plastic tape.
- J. Solder: FS QQ-S-571 type.
- K. Flux: FS O-F-506.

L. Metal clamp type snow stops to match roof.

### 2.04 FABRICATION

- A. Form sections in 12" maximum width, true to shape, accurate in size, square, and free from distortion or defects.
- B. Fabricate cleats of same material as sheet, interlockable with sheet, per manufacturer's recommendations.
- C. Fabricate starter strips of same material as sheet, continuous, interlockable with sheet.
- D. Form pieces in longest practical lengths. (No horizontal end joints.)
- E. Hem exposed edges on underside 1/2 inch; miter and seam corners.
- F. Form material with standing seams.
- G. Pretin edges of metal sheet. Solder shop formed metal joints. After soldering, remove flux. Wipe and wash solder joints clean. Weather seal joints.
- H. Fabricate corners from one piece with minimum 18 inch long legs; seam for rigidity, seal with sealant.
- I. Fabricate vertical faces with bottom edge formed outward 1/4 inch and hemmed to form drip.
- J. Fabricate flashings to allow toe to extend 2 inches over roofing. Return and brake edges.
- K. Standing seam to be continuous at corners where turned down to fascia.
- L. Attach metal snow stops as per manufacturer's recommendation.

### 2.05 SHOP FINISHING

- A. Shop prepare and prime exposed ferrous metal surfaces.
- B. Backpaint concealed metal surfaces with protective backing paint to a minimum dry film thickness of 15 mil.

#### PART 3 EXECUTION

### 3.01 EXAMINATION

- A. Inspect roof deck to verify deck is clean and smooth, free of depressions, waves, or projections, properly sloped to eaves.
- B. Verify deck is dry. Verify flutes in steel deck are dry.
- C. Verify correct placement of wood nailers.
- D. Verify roofing membrane termination and base flashings are in place, sealed, and secure.
- E. Beginning of installation means acceptance of existing conditions.

#### 3.02 PREPARATION

- A. Field measure site conditions prior to fabricating work.
- B. Install starter and edge strips, and cleats before starting installation.

- C. Install surface mounted reglets true to lines and levels. Seal top of reglets with sealant.
- D. Protect elements surrounding work of this Section from damage or disfigurement.

# 3.03 INSTALLATION

- A. Conform to drawing details included in NAAMM, SMACNA, NRCA manual.
- B. Apply underlayment in 1 layer of 30 lb. felt.
- C. Apply slip sheet in one layer, laid loose.
- D. Cleat and seam all joints.
- E. Use bedding compound for joints between metal and bitumen or metal and felts.
- F. Aligning transverse joints of roofing sheets is not allowed.
- G. Solder intersection joints. After soldering, wash metal clean with neutralizing solution and rinse with water.
- H. Apply ice and water shield at all eaves.
- I. Install snow stops in areas above entry doors; see drawings.

### 3.04 STANDING SEAM ROOFING

A. Conform to SMACNA details, Plates 85, 86, and 87.

#### 3.05 FLASHINGS

- A. Conform to SMACNA details, Plates 54.
- B. Seal metal joints watertight.

### 3.06 FIELD QUALITY CONTROL

- A. Field inspection will be performed under supervision of manufacturer's representative.
- B. Inspection will involve surveillance of work during installation to ascertain compliance with specified requirements.

# SHEET METAL FLASHING AND TRIM (Prefinished)

### PART 1 GENERAL

### 1.01 WORK INCLUDED

- A. Fascias and soffits.
- B. Roof flashings.
- C. Counterflashings at flues and vent stacks.

### 1.02 RELATED WORK

- A. Section 06001: Wood blocking, nailers, and grounds.
- B. Section 07900 Joint Sealers.

### 1.03 REFERENCES

- A. ASTM A525 Steel Sheet, Zinc Coated, (Galvanized) by the Hot-Dip Process.
- B. NAAMM Metal Finishes Handbook.
- C. NRCA (National Roofing Contractors Association) Roofing Manual.
- D. SMACNA Architectural Sheet Metal Manual.

### 1.04 SYSTEM DESCRIPTION

A. Work of this Section is to physically protect roofing, base flashings, and building components from damage that would permit water leakage to building interior.

#### PART 2 PRODUCTS

#### 2.01 SHEET MATERIALS

A. Galvanized Steel: ASTM A525, G90; 22 gage Factory finished core steel. Color to be selected by Architect.

### 2.02 ACCESSORIES

- A. Fastener: Galvanized steel. Finish exposed fasteners same as flashing metal.
- B. Underlayment: ASTM D266; No. 15 asphalt saturated roofing felt.
- C. Metal Primer.
- D. Sealant: Caulk type specified in Section 07900.

### 2.03 FABRICATION

- A. Form sections true to shape, accurate in size, square, and free from distortion or defects.
- B. Fabricate cleats and starter strips of same material as sheet, minimum 6 inches wide.

- C. Form pieces in longest practical lengths.
- D. Hem exposed edges on underside 1/2 inch; miter and seam corners.
- E. Form material with cover plate seam.
- F. Fabricate corners from one piece with minimum 18 inch long legs; seam or solder for rigidity, seal with sealant.
- G. Fabricate vertical faces with bottom edge formed outward 1/4 inch and hemmed to form drip.

### 2.04 FINISH

A. Shop prepare and prime exposed ferrous metal surfaces. See Section 09900.

#### PART 3 EXECUTION

### 3.01 INSPECTION

- A. Verify roof openings, curbs, pipes, sleeves, ducts, or vents through roof are solidly set, cant strips and reglets in place, and nailing strips located.
- B. Verify membrane termination and base flashings are in place, sealed, and secure.
- C. Beginning of installation means acceptance of existing conditions.

### 3.02 PREPARATION

- A. Field measure site conditions prior to fabricating work.
- B. Install starter and edge strips, and cleats before starting installation.
- C. Secure flashings in place using concealed fasteners. Use exposed fasteners only in locations approved by Architect/Engineer.
- D. Lap and seal all joints.
- E. Fit flashings tight in place. Make corners square, surfaces true and straight in planes, and lines accurate to profiles.
- F. Seal metal joints watertight.

#### 3.03 INSTALLATION

A. Conform to drawing details and standards of industry.

### JOINT SEALERS

### PART 1 GENERAL

#### 1.01 SECTION INCLUDES

- A. Preparing sealant substrate surfaces.
- B. Sealant and backing.

#### 1.02 REFERENCES

- A. ASTM C790 Use of Latex Sealing Compounds.
- B. FS TT-S-00227 Sealing Compound: Elastomeric Type, Multi-Component.

### 1.04 SUBMITTALS

- A. Submit product data under provisions of GENERAL CONDITIONS.
- B. Submit product data indicating sealant chemical characteristics, performance criteria, limitations, and color availability.

### 1.05 QUALITY ASSURANCE

- A. Manufacturer: Company specializing in manufacturing the products specified in this Section with minimum 3 years documented experience.
- B. Conform to Sealant and Waterproofers Institute requirements for materials and installation.

### 1.06 ENVIRONMENTAL REQUIREMENTS

- A. Do not install solvent curing sealants in enclosed building spaces.
- B. Maintain temperature and humidity recommended by the sealant manufacturer during and after installation.

### 1.07 SEQUENCING AND SCHEDULING

A. Coordinate the work of this Section with all Sections referencing this Section.

### 1.08 WARRANTY

- A. Provide 3 year warranty.
- B. Warranty: Include coverage of installed sealants and accessories which fail to achieve air tight and watertight seal, exhibit loss of adhesion or cohesion, or do not cure.

### PART 2 PRODUCTS

#### 2.01 SEALANTS

A. Polysulphide Sealant: FS TT-S-00227, Type II - non-sag, Class A; white color; manufactured by Thiokol; color to match surrounding surfaces.

### 2.02 ACCESSORIES

07900 - 1 Joint Sealers

- A. Primer: Non-staining type, recommended by sealant manufacturer to suit application.
- B. Joint Cleaner: Non-corrosive and non-staining type, recommended by sealant manufacturer; compatible with joint forming materials.
- C. Joint Backing: ANSI/ASTM D1056; round, cell polyethylene foam rod; oversized 30 to 50 percent larger than joint width.
- D. Bond Breaker: Pressure sensitive tape recommended by sealant manufacturer to suit application.

### PART 3 EXECUTION

### 3.01 EXAMINATION

- A. Verify that surfaces and joint openings are ready to receive work and field measurements are as shown on Drawings and recommended by the manufacturer.
- B. Beginning of installation means installer accepts existing surfaces.

### 3.02 PREPARATION

- A. Clean and prime joints in accordance with manufacturer's instructions.
- B. Remove loose materials and foreign matter which might impair adhesion of sealant.
- C. Verify that joint backing and release tapes are compatible with sealant.
- D. Perform preparation in accordance with sealant manufacturer's instructions.
- E. Protect elements surrounding the work of this Section from damage or disfiguration.

### 3.03 INSTALLATION

- A. Install sealant in accordance with manufacturer's instructions.
- B. Measure joint dimensions and size materials to achieve required width/depth ratios.
- C. Install joint backing to achieve a neck dimension no greater than 1/3 the joint width.
- D. Install bond breaker where joint backing is not used.
- E. Apply sealant within recommended application temperature ranges. Consult manufacturer when sealant cannot be applied within these temperature ranges.
- F. Install sealant free of air pockets, foreign embedded matter, ridges, and sags.
- G. Tool joints concave.

### 3.04 CLEANING AND REPAIRING

- A. Clean work under provisions of GENERAL CONDITIONS.
- B. Clean adjacent soiled surfaces.
- C. Repair or replace defaced or disfigured finishes caused by work of this Section.

### 3.05 PROTECTION OF FINISHED WORK

07900 - 2 Joint Sealers

- A. Protect finished installation under provisions of GENERAL CONDITIONS.
- B. Protect sealants until cured.

END OF SECTION

07900 - 3 Joint Sealers

### ALUMINUM ENTRANCES AND STOREFRONTS

### PART 1 GENERAL

#### 1.01 WORK INCLUDED

- A. Aluminum windows and doors, frames, and glazed lights.
- B. Glass.
- C. Anchors, brackets, and attachments.
- D. Door hardware.
- E. Perimeter sealant.

### 1.02 RELATED WORK

- A. Section 06001 Carpentry Work:
- B. Section 07900 Joint Sealers: Perimeter sealant and back-up materials.

### 1.03 REFERENCES

- A. ANSI/ASTM A386 Zinc Coating (Hot-Dip) on Assembled Steel Products.
- B. ANSI/ASTM B221 Aluminum-Alloy Extruded Bar, Rod, Wire, Shape, and Tube.
- C. ASTM B209 Aluminum and Aluminum-Alloy Sheet and Plate.

### 1.04 PERFORMANCE

- A. System to provide for expansion and contraction within system components caused by a cycling temperature range of 120 F degrees without causing detrimental effects to system or components.
- B. Design and size members to withstand dead loads and live loads caused by pressure and suction of wind as calculated in accordance with I. B. C.
- C. Limit mullion deflection to 1/200, or flexure limit of glass with full recovery of glazing materials, whichever is less.
- D. Drain water entering joints, condensation occurring in glazing channels, or migrating moisture occurring within system, to exterior.
- E. Limit air infiltration through assembly to 0.06 cu ft/min/sq ft of assembly surface area, measured at a reference differential pressure across assembly of 0.3 inches water gage as measured in accordance with ANSI/ASTM E283.
- F. System to accommodate, without damage to system or components, or deterioration of perimeter seal: Movement within system; movement between system and perimeter framing components; dynamic loading and release of loads; and deflection of structural support framing.

### 1.05 SUBMITTALS

- A. Submit shop drawings and product data under provisions of GENERAL CONDITIONS.
- B. Include system and component dimensions; components within assembly; framed opening

requirements and tolerances; anchorage and fasteners; glass and infills; door hardware requirements; and affected related work.

- C. Submit manufacturer's installation instructions.
- D. Submit samples under provisions of GENERAL CONDITIONS.
- E. Submit two samples, 3" X 3" in size, illustrating prefinished aluminum surface and specified glass.

### 1.06 DELIVERY, STORAGE, AND HANDLING

- A. Deliver and handle system components under provisions of GENERAL CONDITIONS.
- B. Store and protect system components under provisions of GENERAL CONDITIONS.
- C. Provide wrapping to protect prefinished aluminum surfaces.

### 1.07 WARRANTY

- A. Provide three year manufacturer's warranty.
- B. Warranty: Cover complete system for failure to meet specified requirements.

### PART 2 PRODUCTS

### 2.01 ACCEPTABLE MANUFACTURERS

- A. Kawneer Frame Style 350 Doors
- B. Capital Glass 3-1/2" Frame Doors
- C. Substitutions: Under provisions of GENERAL CONDITIONS.

### 2.02 MATERIALS

- A. Extruded Aluminum: ANSI/ASTM B221; 6063T5 aluminum alloy.
- B. Sheet Aluminum: ASTM B209; 6063T5 aluminum alloy.
- C. Fasteners: Stainless, Galvanized steel.

### 2.03 FABRICATED COMPONENTS

- A. Frames: 2" x 4-1/2" profile.
- B. Doors: 2 inches thick, 3-1/2 inch wide top rail, 3-1/2 inch wide vertical stiles, 10 inch wide bottom rail to meet ADA requirements; square glazing stops.
- C. Reinforced Mullion: 2 x 4-1/2 inch profile of extruded aluminum cladding with internal reinforcement of steel shaped structural section.

#### 2.04 GLASS AND GLAZING MATERIALS

- A. Glass in Exterior Window Lights (either side of Entry Doors/Sidelights and Exterior Windows): 1" Low 'E' insulated tempered plate glass.
- B. Glass in Door: Low 'E', insulated tempered glass.

#### 2.05 HARDWARE

- A. Weatherstripping, Sill Sweep Strips, Weatherstripping Thresholds, Hinges: Manufacturers' standard type to suit application.
- B. Push/Pull: Kawneer 1" Round Style, C09 pull; #CP II push, mill finish.
- C. Closer: LCN.
- D. Exit Device: Kawneer #1590 Panic (mill finish). (1) each outside entry door.
- E. Cylinder Lock: Outside door #1 is to have a panic exit device with cylinder lock from outside.

### 2.06 FABRICATION

- A. Fabricate doors and frames allowing for minimum clearances and shim spacing around perimeter of assembly, yet enabling installation.
- B. Rigidly fit and secure joints and corners with internal reinforcement. Make joints and connections flush, hairline, and weatherproof.
- C. Develop drainage holes with moisture pattern to exterior.
- D. Prepare components to receive anchor devices. Fabricate anchorage items.
- E. Arrange fasteners, attachments, and jointing to ensure concealment from view.
- F. Prepare components with internal reinforcement for door hardware.

#### 2.07 FINISHES

- A. Exterior Extruded Aluminum Surfaces: Color by Architect.
- B. Interior Exposed Aluminum Surfaces: Color by Architect.
- C. Concealed Steel Items: Galvanized in accordance with ANSI/ASTM A386 to 2.0 oz/sq ft. Primed with iron oxide paint.
- D. Apply one coat of bituminous paint to concealed aluminum and steel surfaces in contact with cementitious or dissimilar materials.

#### PART 3 EXECUTION

#### 3.01 INSPECTION

- A. Verify wall openings and adjoining air and vapor seal materials are ready to receive work of this Section.
- B. Beginning of installation means acceptance of existing conditions.

#### 3.02 INSTALLATION

- A. Install doors, frames, glazing and hardware in accordance with manufacturer's instructions.
- B. Use anchorage devices to securely attach frame assembly to structure.
- C. Align assembly plumb and level, free of warp or twist. Maintain assembly dimensional tolerances,

- aligning with adjacent work.
- D. Coordinate attachment and seal of air and vapor barrier materials. Install sill flashings.
- E. Pack fibrous insulation in shim spaces at perimeter of assembly to maintain continuity of thermal barrier.
- F. Install hardware using templates provided. Refer to Section 08712 for installation requirements.
- G. Install glass in accordance with Section 08800, using exterior dry method of glazing.
- H. Install perimeter joint type sealant, backing materials, and installation requirements in accordance with Section 07900.
- I. Adjust operating hardware.

### 3.03 TOLERANCES

- A. Variation from Plane: 0.03 inches per foot maximum or 0.25 inches per 30 feet, whichever is less.
- B. Misalignment of Two Adjoining Members Abutting in Plane: 0.015 inches.

### 3.04 CLEANING

- A. Remove protective material from prefinished aluminum surfaces.
- B. Wash down exposed surfaces using a solution of mild detergent in warm water, applied with soft, clean wiping cloths. Take care to remove dirt from corners. Wipe surfaces clean.
- C. Remove excess sealant by moderate use of mineral spirits or other solvent acceptable to sealant manufacturer.

#### SINGLE HUNG VINYL WINDOWS

### PART 1 - GENERAL

#### 1.01 SUMMARY

- A. This Section includes single hung vinyl windows.
- B. Refer to Section 07900 for joint sealants.

### 1.02 SUBMITTALS

- A. Shop Drawings: Furnish detailed shop and installation drawings of windows. Drawings shall show full size sections of windows, glazing and hardware, thickness of members, methods of construction, means of anchorage, types and locations of sealants; indicate reinforcing.
- B. Samples: Prior to fabrication, submit 12" samples of window showing typical extruded shapes and corner joints. For verification purposes, submit color samples representing full range of finish color on windows to be installed.
- C. Certification, signed by window manufacturer and Contractor that windows installed comply with specified requirements.

### 1.03 QUALITY ASSURANCE

- A. Owner reserves the right to inspect similar installations by proposed installer before approving start of this installation work and approving installer.
- B. Certify that windows have been tested in accordance with Architectural Vinyl Manufacturers Association.
- C. Insulating glass: Each unit shall meet Sealed Insulating Glass Manufacturers Association (SIGMA) Standards for construction and insulating value and manufactured by a company complying with (SIGMA) Standards.
- D. Glazing and Sealant: Factory installed.

### 1.04 DELIVERY, STORAGE AND HANDLING

- A. Materials shall be packed, unloaded, stored and protected to avoid abuse, damage and defacement from any source in accordance with recommendations from manufacturer.
- B. When unloading, remove all paper type wrappings and interleavings that are wet or which could become wet.
- C. Store inside in a clean well drained areas free of dust and corrosive fumes.
- D. Stack vertically or on edge so that water cannot accumulate on or within materials, use wood or plastic shims between components to provide water drainage and air circulation.
- E. Cover materials with tarpaulins or plastic hung on frames to provide air circulation and prevent contaminants from contacting aluminum.

### 1.05 WARRANTIES

A. Warranty windows against material and workmanship defects for a period of 2 years from date of substantial completion. Products found to be unsatisfactory shall be replaced or repaired at no cost to Owner.

- B. Installation Warranty: warranty installation of the windows for a period of 2 years from date of substantial completion. Workmanship or materials found to be unsatisfactory shall be replaced or repaired at no cost to Owner.
- C. Factory sealed insulating glass units shall be warranted for a period of 5 years from date of acceptance of installation by Owner.
- D. Finish shall be warranted, in writing, for 5 years from date of acceptance of installation by Owner. Warranty shall cover finish against checking, crazing, peeling, blistering, chalking, fading, pitting, and failure of chemical resistance.

### PART 2 - PRODUCTS

### 2.01 SINGLE HUNG WINDOWS

- A. Vinyl: Vinyl windows are be used.
  - 1. Approved Product: Model 8100; VIKING INDUSTRIES, INC. Portland, OR.
  - 2. Approved Substitute Manufacturer: Milguard
  - 3. Substitutions: Comply with provisions of Conditions of the Contract.

#### B. Screen:

- 1. Frame and finish to match window.
- 2. Wired with fiberglass screen cloth (18 x 14 fibrous mesh).
- 3. Four nylon latches fix screen in place.

### C. Weatherstripping:

- 1. Rolling Panel Fin seal weatherstripping on complete exterior perimeter.
- 2. Fixed Panel Complete perimeter drop in glazing using a double faced adhesive tape and vinyl glazing beads.
- D. Hardware: Heavy duty positive action security latch, safety activated to eliminate keeper breakage. Provide secondary stop to allow window to be secured when opened 6 inches.
- E. Glazing: Minimum 5/8" insulating glass as specified in Section 08800.

#### 2.02 MATERIALS

- A. All equipment must operate between 20 degrees F and 120 degrees F in all climate conditions.
- B. Fasteners, where exposed, shall be stainless steel prefinished same as window. Where not exposed, may be cadmium or zinc plated steel. Anchors shall be aluminum or steel providing the steel is properly insulated from the aluminum. The system shall provide for preshimmed glazing tape on the exterior and elastomeric gaskets on interior.

### 2.03 FABRICATION

- A. Weep Systems:
  - 1. The glazing system must be designed so that moisture does not accumulate in the glazing channel.
  - 2. A weep system should incorporate enough weep holes to ensure adequate drainage. All exposed weep holes shall be baffled using a 30 PPI open-cell foam baffle. The weep size shall be manufactured standard to allow adequate drainage.
- B. Provide nailing fins for frame construction.

#### 2.04 GLAZING

A. Glazing shall be performed in window manufacturer's plant under close quality control, or in field so that completed installation produces results equal to Manufacturer's standard.

- B. Glass shall be held in place with Neoprene wedge on interior side of glass and a pre-shined butyl tape on the exterior. All screws and miscellaneous fasteners shall be of aluminum, stainless steel, plated, or non-corrosive material. All intermediate horizontal framing sections shall be narrower in depth than the vertical framing sections, to conceal sawcuts where horizontals and verticals abut.
- C. Insulated glass units to be manufactured by a company complying with SIGMA Construction, Insulating and Quality Control Specifications and be CBA rated.

#### 2.05 SHOP SEALANTS

- A. Shop sealants shall cover joints which are sealed in manufacturer's plant as part of his assembly procedures. In general this shall include, but not be limited to such items as sash and frame joints, fixed end of mullion splice, end dams, etc.
- B. Shop sealant shall be silicone, acrylic or polyurethane, of proper color to match adjacent materials as manufactured by Tremco or Pecora meeting AAMA Specification 803.2.
- C. Shop sealants shall be located and identified on shop drawings.

#### 2.06 FABRICATION AND WORKMANSHIP

- A. Work shall conform to applicable provisions of local building codes. Coordinate work with that of other trades and report errors, omissions and inconsistencies. Promptly furnish items to be placed during installation of other work. Drawings for templates shall be provided for proper location of these items.
- B. Insofar as practicable, fitting, assembly and glazing of work shall be done in the factory.
- C. Exposed work shall be carefully matched to produce continuity of line and design. Joints in exposed metal work, unless otherwise shown or specified, shall be accurately fitted and rigidly secured with hairline contacts.
- D. Fabricate and fasten metal work so that this metal will not be distressed nor fasteners overstressed from expansion and contraction. Fasteners in aluminum shall be stainless steel or aluminum. Corner connections to be anchor set.

#### PART 3 - EXECUTION

### 3.01 EXAMINATION

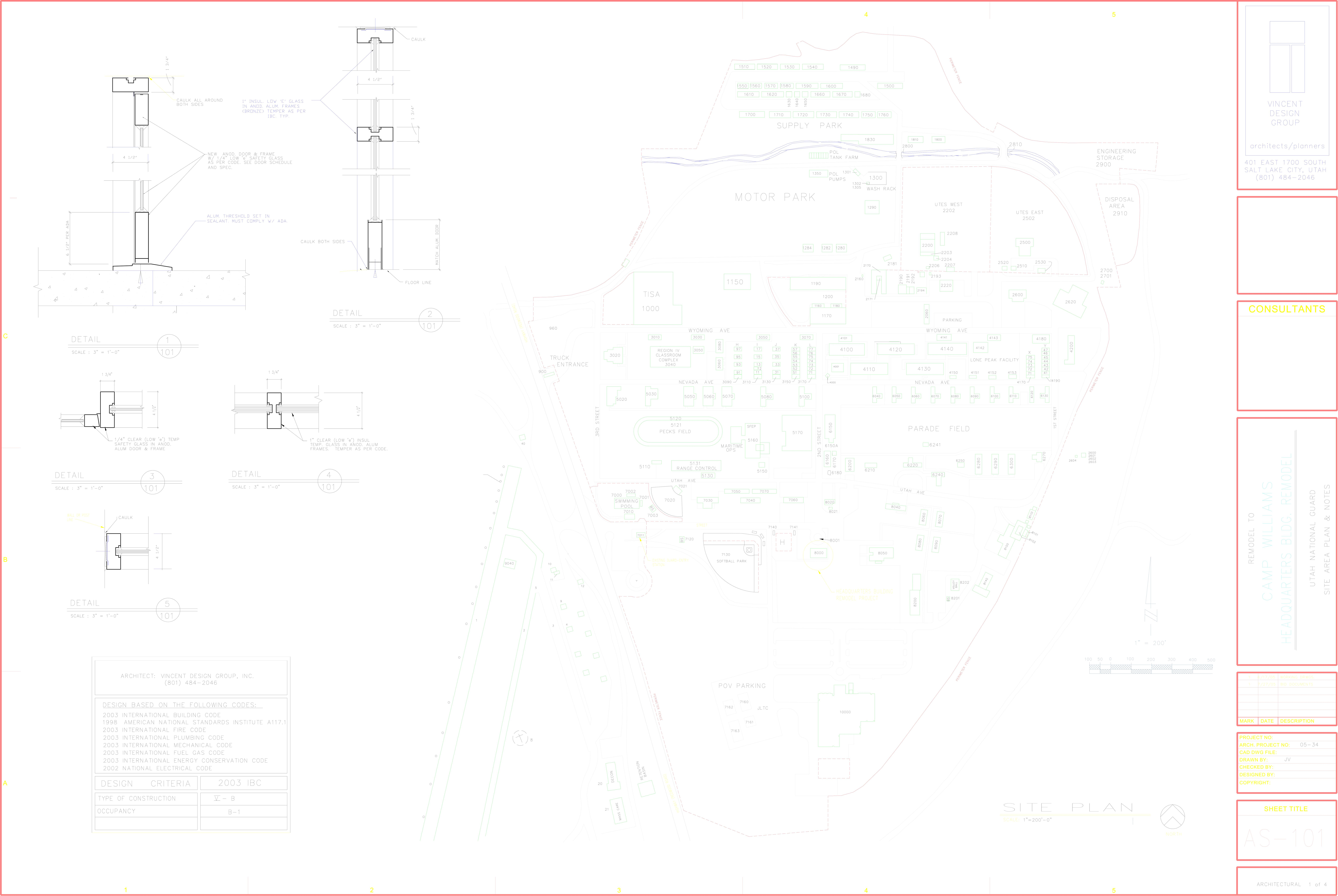
A. Examine areas in which work is to be performed. Report in writing to Owner all prevailing conditions that will adversely affect satisfactory execution of work. Do not proceed with work until unsatisfactory conditions have been corrected. Deficiencies in work of this Section resulting from failure to properly examine observable conditions at time of installation shall be corrected at no additional cost to Owner.


### 3.02 INSTALLATION

- A. Set windows plumb, square, level, and fastened securely in correct vertical and horizontal alignment. Comply with manufacturer's instructions for installation of window units, hardware and other components.
- B. Seal perimeter joints in accordance with SECTION 07920.

### 3.03 PROTECTION AND CLEANING

- A. Protect erected windows during remainder of construction. Replace damaged windows.
- B. Clean windows using compatible cleaning agents which will not harm glass, aluminum or sealants.
- C. Warranty period commences when windows are cleaned and written acceptance by Owner is issued.
- D. Repair or replace stained, discolored, or abraded surfaces.





VINCENT DESIGN GROUP

architects/planners

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CONCLUTANTO

TERS BLDG, REMODEL

1 7/14/05 WORKING DRAWINGS

ARK DATE DESCRIPTION

PROJECT NO:

ARCH. PROJECT NO: 05-34

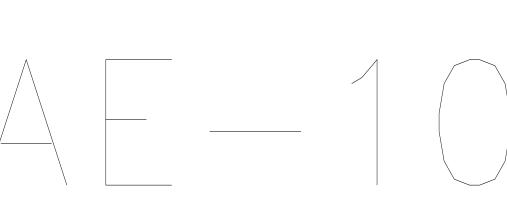
CAD DWG FILE:

DRAWN BY: JV

CHECKED BY:

DESIGNED BY:

SHEET TITLE



ARCHITECTURAL 2 of 4

